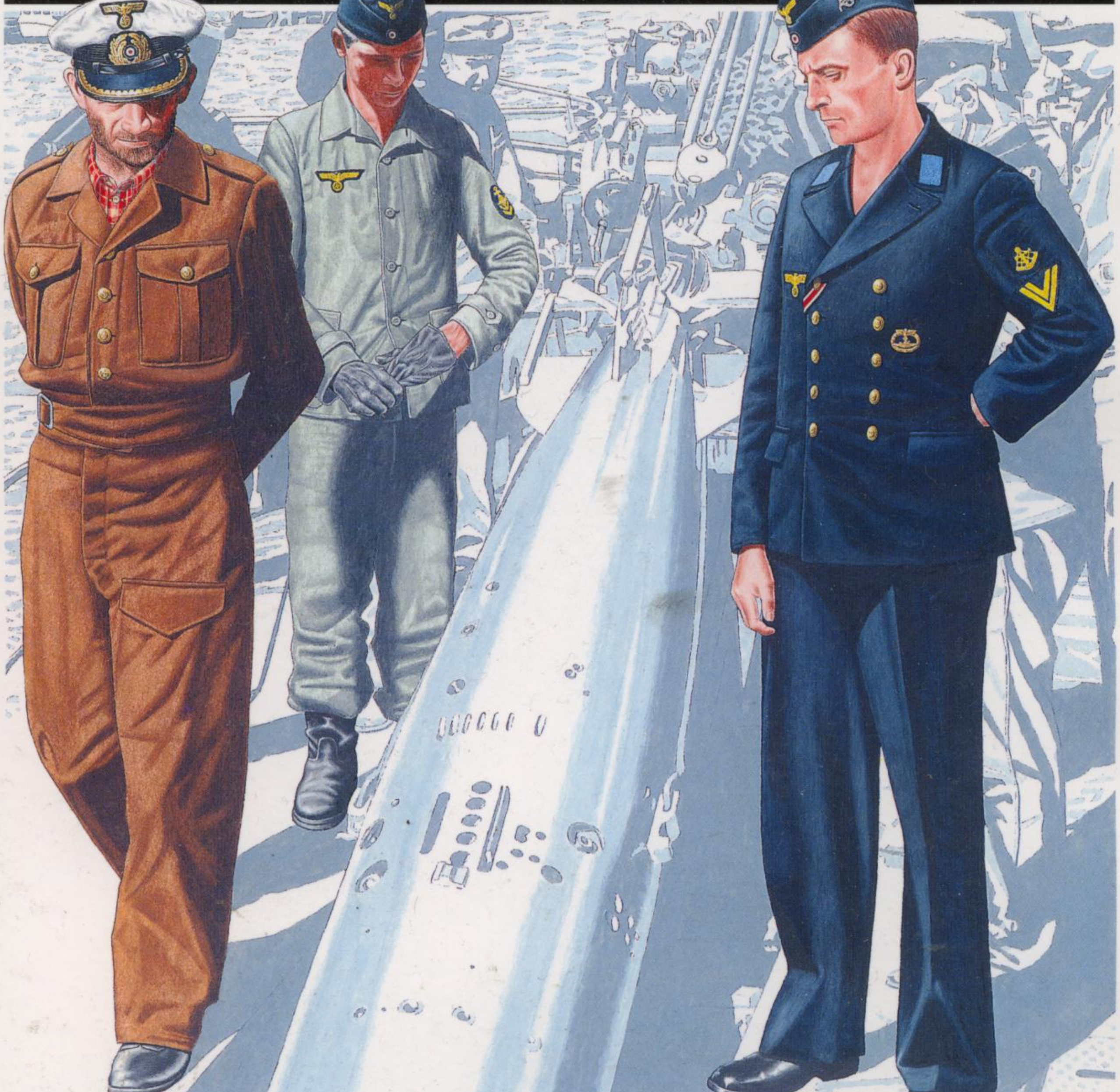
OSPREY MILITARY

ELITE SERIES 60

U-BOAT CREWS 1914-45



GORDON WILLIAMSON DARKO PAVLOVIC

EDITOR: LEE JOHNSON

OSPREY MILITARY ELITE SERIES 60

U-BOAT CREWS 1914-45

Text by
GORDON WILLIAMSON
Colour plates by
DARKO PAVLOVIC

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All enquiries should be addressed to:

Darko Pavlović
Drás Kovićeva 50
4100 Zagreb
Croatia

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INTRODUCTION

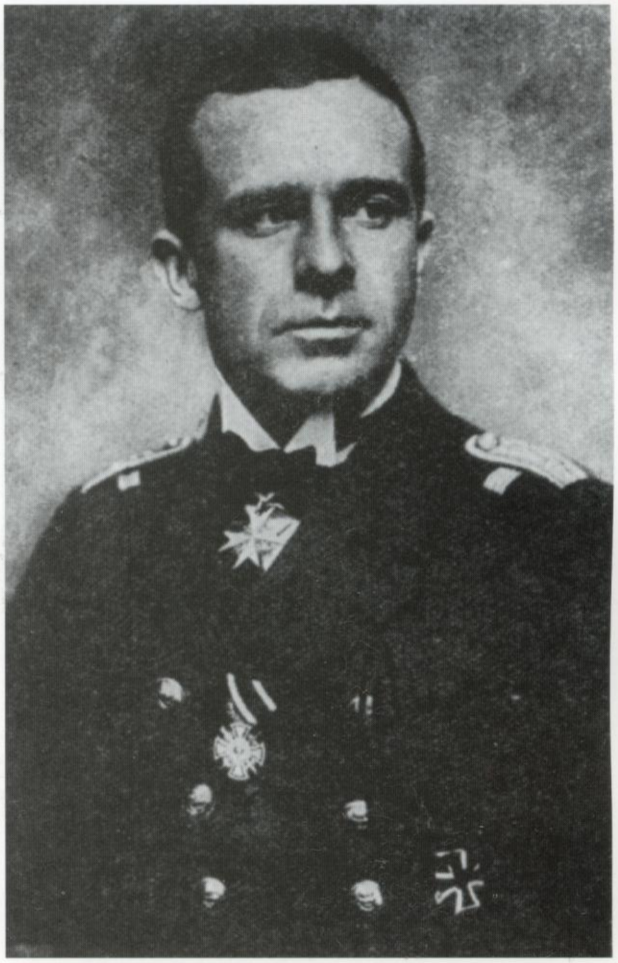
During World War Two, if one single weapon in Germany's arsenal can be said to have come closest to winning the war for the Third Reich, it was without doubt the U-Boat.

Winston Churchill himself admitted as much when, after the war, he revealed that the U-Boat menace was the only thing that had really caused him to fear that Great Britain would lose the war against Germany. Had this happened, the Allies would have been deprived of Great Britain as a base from which to launch operations against the Third Reich, and the invasion of German-occupied Europe would probably never have taken place.

German U-Boat technology, training, tactics and combat successes far exceeded those of any of the other combatant nations, and even as the Third Reich was crumbling, technically advanced vessels such as the Type XXI, many years ahead of its time, were being put into volume production.

The ultimate defeat of the U-Boat threat owed much to a single intelligence coup by the British – the discovery of the German '*Schlusselmaschine*', the so-called 'Enigma' encoding device, and the subsequent reconstruction of such a device, which led to British cryptologists cracking the German secret codes. The British were thus able to intercept and decode much of the German signals traffic, allowing them to track down German submarines and their supply vessels at rendezvous points thought to be secret, and to re-route convoys away from areas where U-Boats were known to be lying in wait.

The breathing space which this discovery gave the British allowed time for the development of sophisticated direction finders and underwater detection devices, which finally turned the tide of war against the U-Boats. In view of the fact that for the greater part of the war the U-Boats had, unbeknown to them, the odds stacked against them, the achievements of the U-Boot Waffe were impressive.



The greatest U-Boat ace of all time, Kapitänleutnant Lothar Arnauld de la Periere. At his neck he wears the coveted Pour le Merité, more commonly referred to as the 'Blue Max'. He wears the traditional naval frock-coat, apparent from the braid loop sewn at the shoulder seam, by which the shoulder strap is attached. Note the winged collar to the shirt, and the black bow-tie.

Despite the understandably biased Allied reportage, the vast majority of U-Boat commanders carried out their duties in as honourable a fashion as this type of warfare allowed. This is attested to by the fact that so many Allied senior naval figures came forward after the war, when attempts were being made to vilify U-Boat men as war criminals, and averred that

Kapitänleutnant Otto Hersing, holder of the Pour le Merité. Note the Iron Cross First Class pinned to the left breast of his frock-coat and the Iron Cross Second Class worn at the buttonhole. Hersing earned his place in history as the commander of the first submarine to sink an enemy warship by torpedo attack. The victim was the British cruiser H.M.S. Pathfinder.

they themselves had behaved in at least as aggressive a manner, if not more so – especially in the case of some American submarine crews serving in Pacific waters – as their German counterparts.

U-Boat crewmen were predominantly volunteers throughout the war, and selection procedures were rigorous in the extreme, resulting in the U-Boot Waffe taking much of the cream of Germany's naval personnel. Though much depended on the personality of the individual commander, traditionally rigid German military discipline was much relaxed for U-Boat crews. Each man felt himself very much dependent on the others, and an *esprit de corps* second to none quickly formed among them. To this day, there is a thriving U-Boat veterans 'community', and the U-Boot Waffe has its own very striking war memorial at Möltenort, near Kiel.

Mention of U-Boats almost invariably brings to mind the great aces of World War Two, names like Kretschmer, Prien, Schepke, Lüth, von Tiesenhausen and others, and the equally exceptional achievements of the U-Boat aces of World War One are often forgotten. However, what was probably the greatest single achievement in submarine warfare, the sinking of three major enemy warships by one German U-Boat in a single engagement, occurred during World War One. Korvettenkapitän Lothar Arnauld de la Periere, the greatest U-Boat ace of all time – sinking 54 enemy vessels in a single cruise – was also an officer of the Kaiserliche Marine. His name, and others such as Weddigen and Hartwig, though famous throughout the U-Boat fraternity, are little known outside Germany.

This book is intended to give the reader an overview of the achievements of the U-Boot Waffe in both wars, together with a study of the uniforms and insignia worn by U-Boat crews.

THE KAISERLICHE MARINE

When war began on 1 August 1914, Germany possessed only 20 U-Boats ready for action, compared with the Royal Navy's total of over 70 submarines. Three days later, Great Britain declared war on Germany, and ten U-Boats, half of Germany's entire fleet, set off on their first war cruise. Their target was nothing less than the Grand Fleet. In the event, two U-Boats were lost – one to a minefield – and not a single British warship was sunk; the cruise was a complete failure.

On 5 September, however, the U-Boats scored their first major success when Leutnant zur See Otto Hersig sank the cruiser H.M.S. *Pathfinder*. Barely three weeks later Oberleutnant zur See Otto Weddigen encountered a force of British warships. In the space of less than an hour he sent the cruisers *Aboukir, Cressy* and *Hogue* to the bottom.

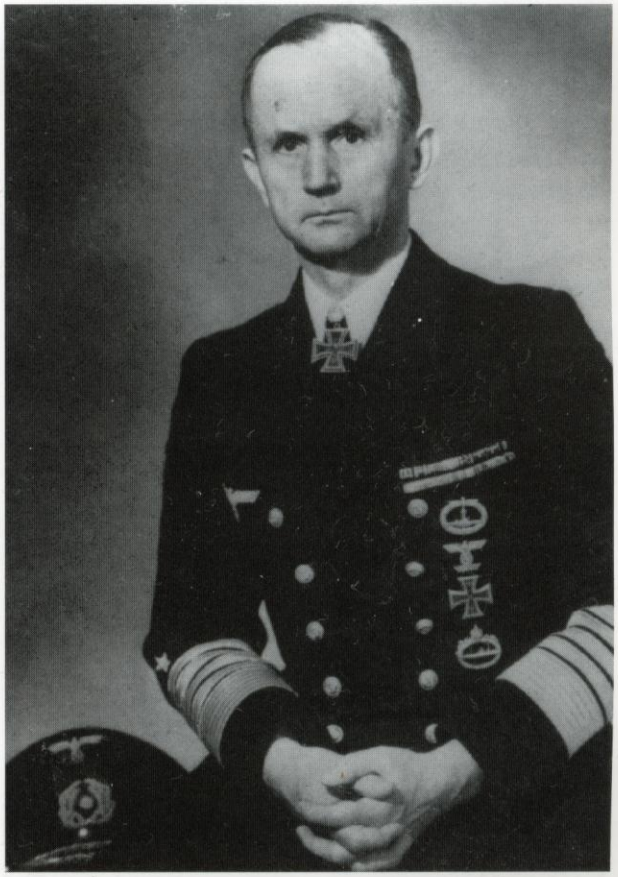
Germany was delighted with its new heroes, and every member of the crew was decorated. Weddigen's boat, the U–9, was granted the right to bear the emblem of the Iron Cross on its conning-tower. No one could now doubt the potency of the U-Boat as a weapon, and German attacks on Allied shipping steadily increased.

One thing worried some factions in the German government: a large proportion of Britain's essential imported materials was carried by neutral ships, and it was feared that attacks on them might bring more countries into the war on Britain's side. By the beginning of 1915, however, the Germans had realised that their rather optimistic hopes for a speedy victory were unrealistic, and that the war at sea would have to be pursued with greater determination. Accordingly the waters around the coast of Great Britain were declared a war zone by Kaiser Wilhelm, with the warning that any shipping, including neutral ships carrying war materials, encountered there was liable to be sunk without warning. Within eight months the average monthly total of Allied shipping being sunk had risen from just under 50,000 tons to almost 200,000 tons.

The decision to allow unrestricted submarine warfare had, as some Germans had feared, enraged many neutral nations, the United States in particular, since deaths of neutral citizens sometimes occurred. Then, in May 1915, the U–20, under the command of Oberleutnant zur See Walther Schwieger, intercepted and sunk the liner *Lusitania* off the southern tip of Ireland. Although it was subsequently clearly established that the liner had indeed been carrying contraband war materials, in the form of thousands of cases of ammunition, shrapnel shells and fuses, Schwieger could not have known this, and his sinking of this great liner, with the loss of 1,198 lives, 128 of them American, provoked international outrage.

The consequences for Germany were grave, as the previously staunch isolationism of the United States gave way to a very pro-British and anti-German viewpoint, which contributed to the ultimate American decision to enter the war against the Central Powers.

In June the Kaiser called off attacks on passenger ships and in September he abandoned unrestricted attacks on merchant ships. The Germans then transferred the bulk of their U-Boat effort to the Mediterranean, and it was in this theatre that the greatest number of sinkings was achieved. In the space of just one month Korvettenkapitän Lothar Arnauld de la Periere sunk 54 ships, a total of over 91,000 tons. He expended just four torpedoes, sinking most of his victims with gunfire while surfaced. A chivalrous adversary, he invariably allowed the crews to abandon ship, and gave them sailing instructions to the nearest landfall before sending their ships to the bottom. By the end of the war he had reached the incredible total of over 200 enemy ships sunk, totalling almost half a million tons.



Grossadmiral Karl Dönitz. Note that he wears the U-Boat war badge from both wars. Below his Iron Cross First Class from World War One is the Imperial U-Boat badge. Above the clasp to the Iron Cross is what is believed to be the special diamond-studded version of the U-Boat badge presented to Dönitz by Grossadmiral Raeder. Dönitz also wears the Knight's Cross of the Iron Cross with Oakleaves.

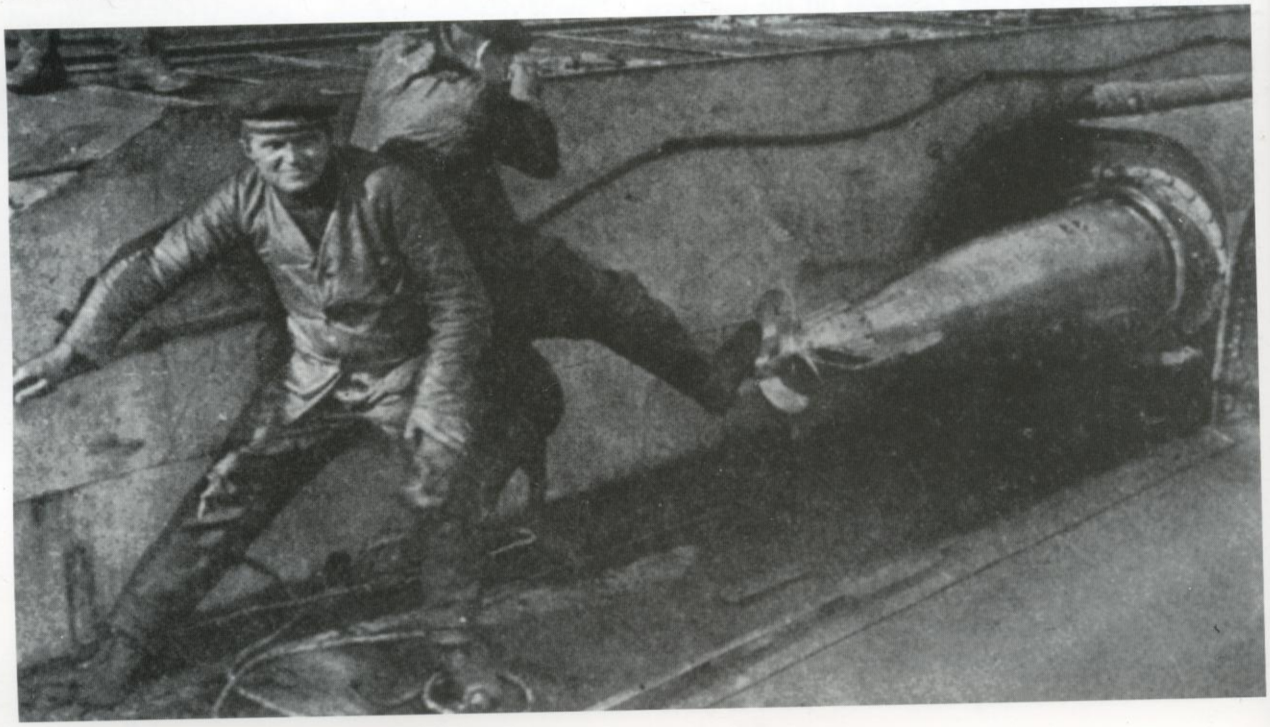
The Allies had little of effect to use against the U-Boats, and by the summer of 1916 around a million tons of Allied shipping had been sunk. Although the British did make use of the so-called 'Q-Ships' – auxiliary cruisers disguised as innocent merchantmen intended to lure the U-Boat to the surface, whereupon the cruiser would bring her hidden guns to bear and sink the U-Boat – during the entire war only 14 U-Boats were lost in this way. In one such case, when U–27 was sunk by the Q-Ship *Baralong*, the survivors from U–27, including her captain, expecting to be rescued by the British, were hunted down one by one and brutally shot. By mid-1916 the U-Boat fleet had grown dramatically, and numbered over 134 vessels, including massive U-Freighters – large submarines that could bring vital supplies of war materials through the British blockade of German waters. By the end of that year Allied shipping losses were reaching crisis proportions. Between October and December of 1916 alone almost half a million tons of shipping were lost.

The Kaiser now gave his unhesitating support to the U-Boat war once again, and in 1917 the efforts of his U-Boat crews were rewarded with remarkable successes: in February 1917 over 256,000 tons of enemy shipping was sunk; in March the total reached 284,000 tons; and in April, over 516,000 tons. Were it not for the United States' entry into the war, in April 1917, it looked almost certain that the U-Boat campaign alone would bring Britain to its knees. In May 1917 over 540,000 tons of shipping was sunk, and the Admiralty gloomily predicted that if things continued thus, the war would be lost by the end of the year.

Then, in that same month, the British introduced the 'convoy' system to give merchant ships travelling together some degree of protection. It certainly paid dividends: only two per cent of ships travelling in convoy were lost as opposed to ten per cent of ships travelling alone. At the same time the Allies began a massive series of mine-laying operations, from Scapa Flow to the Norwegian coast, across the English Channel and along the Danish, Dutch and Norwegian coasts, effectively preventing the U-Boats from entering the Atlantic.

In July 1916 the most effective weapon against submarines so far, the depth charge, claimed its first U-Boat victim. The entry of the United States into the war had also meant a huge influx of warships for the Allies for convoy protection duties and for hunting down the U-Boats. From then on Allied shipping losses were drastically reduced, while U-Boat losses soared. Gradually Allied shipping production overtook losses, and the U-Boat was no longer in a position to decide the war in Germany's favour. Despite a brief flirtation with the concept of U-Cruisers – large submarines fitted with six-inch guns, which did have some success – the German

***Seamen of the Kaiserliche Marine push home a torpedo into its launch tube. Note the special black leather clothing for engine personnel, together with the* Matrosenmütze.**



high command lost faith in the U-Boat as the 'wonder weapon' which would bring ultimate victory.

By 1918 U-Boat losses in comparison with tonnages sunk had reached an unacceptable level, and the morale of the U-Boat crews had deteriorated drastically. In October of that year, in view of impending peace negotiations, all offensive action against enemy shipping was halted. The last significant part played by the U-Boats in World War One was in the suppression of the German naval mutiny in October 1918. Loyal to the end, U-Boat crews were fully prepared to carry out their orders to 'fire without warning on any vessel flying the red flag'.

On 9 November 1918 all U-Boats were ordered to return to home ports to prepare for surrender.

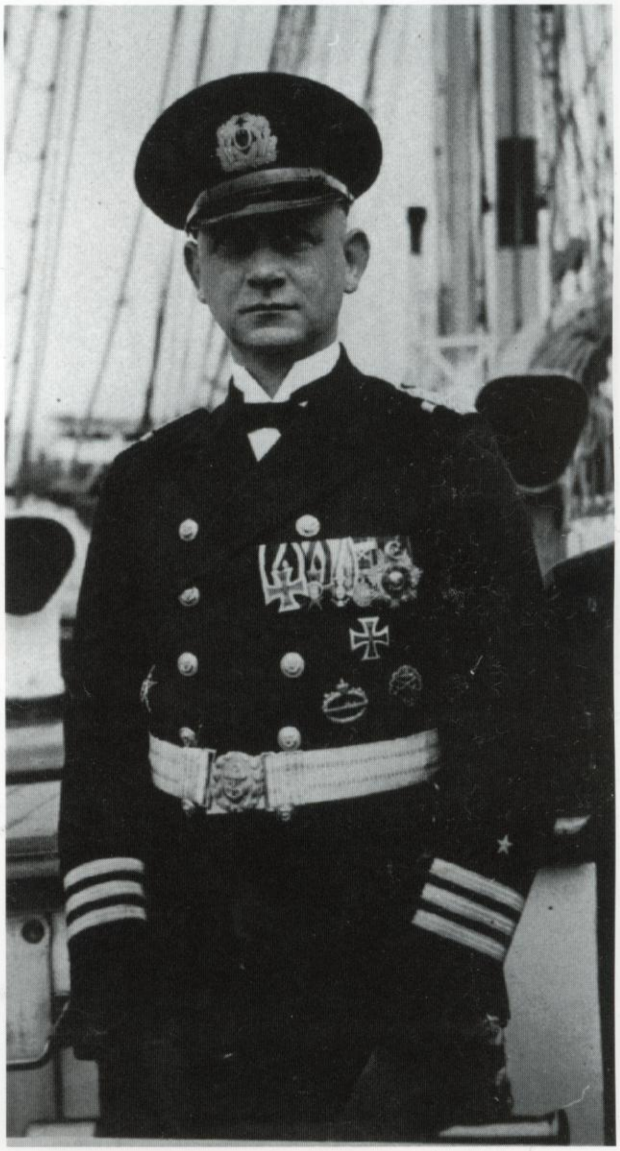
During World War One Germany had produced almost 350 submarines of which almost 180 were lost due to enemy action. Of the 13,000 U-Boat crewmen, 5,354 died in action. Ultimately the U-Boat offensive had failed, but the U-Boat itself had been proven to be a formidable weapon, and its deadly potential was to be fully realised by the new German navy that was to rise from the ashes of the old.

BETWEEN THE WARS

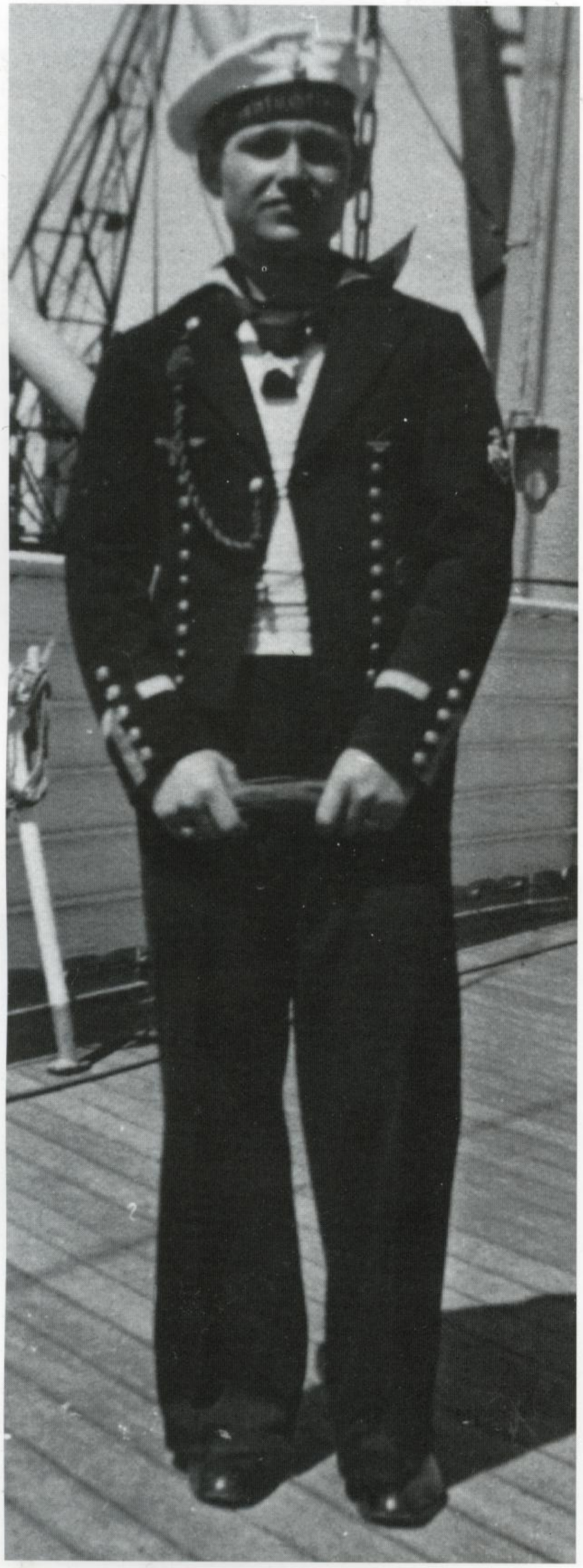
Following the Treaty of Versailles, after World War One, Germany's armed forces were drastically reduced and its navy was prohibited from having any U-Boats whatsoever. Even before the rise of the National Socialists and Hitler's rearmament programme, however, U-Boats were once again being built by German-sponsored firms, using German technology, design and know-how, albeit clandestinely.

The powerful and influential Krupp family had begun to finance a firm in The Hague, Holland, employing German engineers to design and build submarines, ostensibly for sale to foreign powers such as Japan, Turkey and Holland itself. In fact the firm, known as *Ingenieurskantoor voor Scheepsbouw*, was also busily involved in manufacturing essential components for U-Boat construction, and was shipping them back to Germany for stockpiling.

Following the Nazi accession to power, Hitler repudiated the Treaty of Versailles, in March 1935, and by the end of that year the carefully stockpiled components manufactured in Holland had been put to good use in the assembly of 14 U-Boats at the naval yards in Kiel. By mid-1939 the number of U-Boats available had risen to almost 60.



Korvettenkapitän Kümpel, commander of the sail training ship* Niobe. *Kümpel was a veteran of the U-Boot Waffe of World War One, as can be seen by the Imperial U-Boat war badge and Imperial naval wound badge worn on the left breast below the Iron Cross. Just visible on the right breast is the five-pointed star insignia of the* 'Eisernes Halbmond'. *Also of interest is the officer's aluminium brocade dress belt and the cap emblem with its central motif of the Reichsmarine eagle. (Jak P. Mallmann Showell)



The parade uniform with white pullover shirt and white cover to the Matrosenmütze. *Note the petty officer grade gilt braid to the cuffs of the jacket. The sleeve emblem of a gilt metal anchor on which is superimposed a cogwheel indicates the rank of* Maschinenmaat.

Of interest is the blue plaited cord lanyard worn from the right shoulder. This is the marksmanship award of the navy. Shown here is Jakob Mallmann who, as Dieselobermaschinist, *was lost on U–377 in January 1944. (Jak P. Mallmann Showell)*

Although the German navy of the Weimar period, the Reichsmarine, had not been permitted U-Boats, there were still on its strength many experienced veterans of World War One, including Fregattenkapitän Karl Dönitz. An enthusiastic supporter of the U-Boat as a potential war-winning weapon, he impressed his superiors by his dedication, and in September 1935 was rewarded with the command of the newly formed 1 Unterseebootsflotille *Weddigen*. He launched himself into his new duties with enthusiasm, and with great success. He had trained his men to such a high level of readiness that when, in the following year 2 Unterseebootsflotille *Salzwedel* was created, Dönitz was appointed to the newly created post of commander of U-Boats.

As war approached in 1939 the early Type IA and Type IIB boats were being joined by the much larger and vastly improved Type VII U-Boat. This was to be the mainstay of the U-Boot Waffe in World War Two, and the boat in which most of the U-Boat aces were to achieve their greatest successes. Shortly before the outbreak of war Dönitz was promoted to the rank of Konteradmiral.

WORLD WAR TWO

1939

Within two days of the outbreak of war the U-30, under the command of Kapitänleutnant Fritz Julius Lemp, torpedoed and sank the liner *Athenia*, having mistaken her for an auxiliary cruiser. This led the Allies to think that Germany had the intention of carrying out unrestricted submarine warfare, though this was certainly not the case. The propaganda value for the Allies of this apparently deliberate and das-

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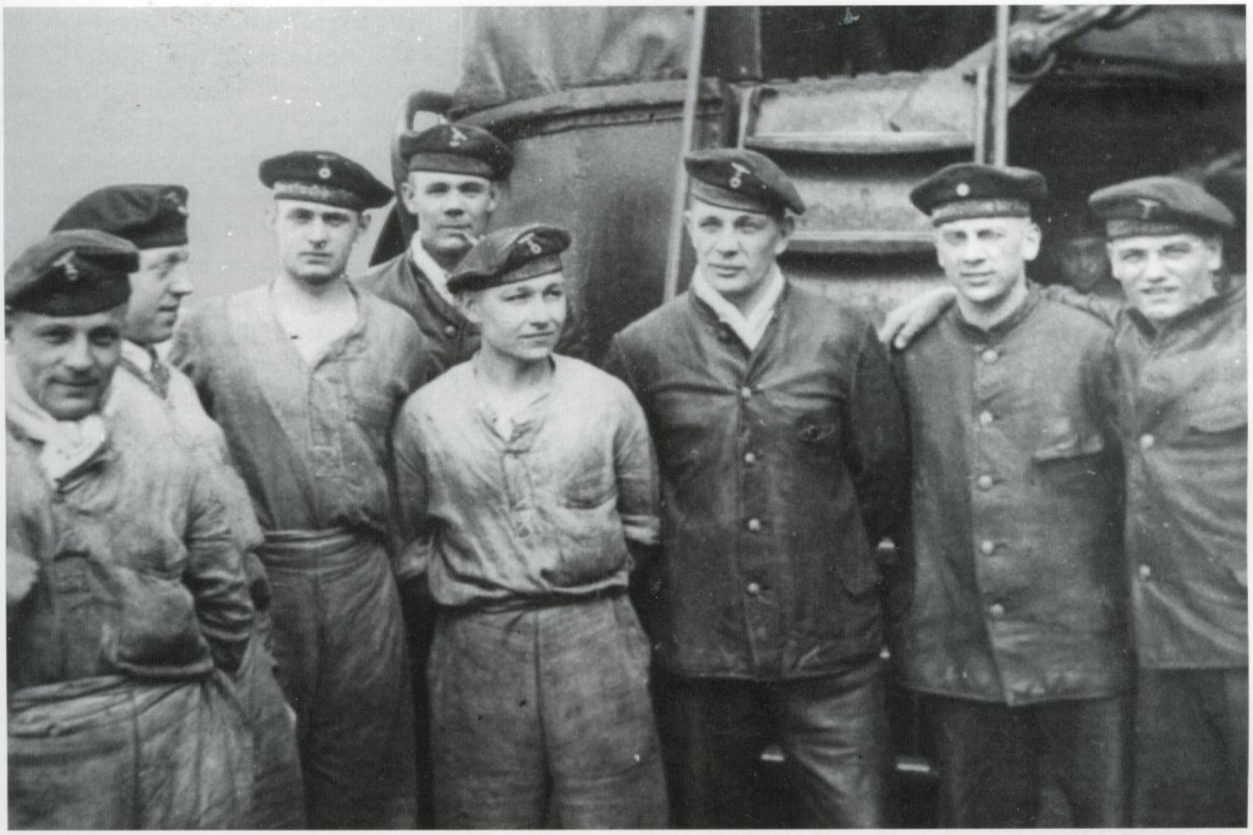


A mixture of working rig and black leather engine personnel clothing worn while refuelling. Note the large patch pocket on the left breast of the white working shirt, and the extremely dirty condition into which these white garments quickly deteriorated. (Jak P. Mallmann Showell)

tardly attack on a passenger liner was immense, and caused much embarrassment to the Germans. Hitler ordered that absolutely no action of any kind was to be taken against passenger ships. Better news was received, however, on 17 September, when U–29, under Kapitänleutnant Otto Schuhhart, torpedoed and sank the British aircraft carrier H.M.S. *Courageous*. Just over a month later, Britain's morale suffered another heavy blow when U–47, under Kapitänleutnant Gunther Prien, penetrated the supposedly impregnable Fleet base at Scapa Flow and sank the battleship *Royal Oak*, with considerable loss of life. By the end of 1939 U-Boat strength stood at 54 and some considerable successes had been achieved; the sinking of the *Royal Oak* in particular had delighted Hitler and done much to enhance the status of Konteradmiral Dönitz and the U-Boats in the eyes of the Führer.

1940

This was to be a year of consolidation for the U-Boot Waffe. Although a further 54 U-Boats were commissioned during the course of the year, some 26 were lost to enemy action, so that the net increase was only 28. In 1940 'wolf-pack' tactics were first used successfully against British convoys, and the fall of France presented the Germans with excellent base facilities for their operations in the Atlantic.

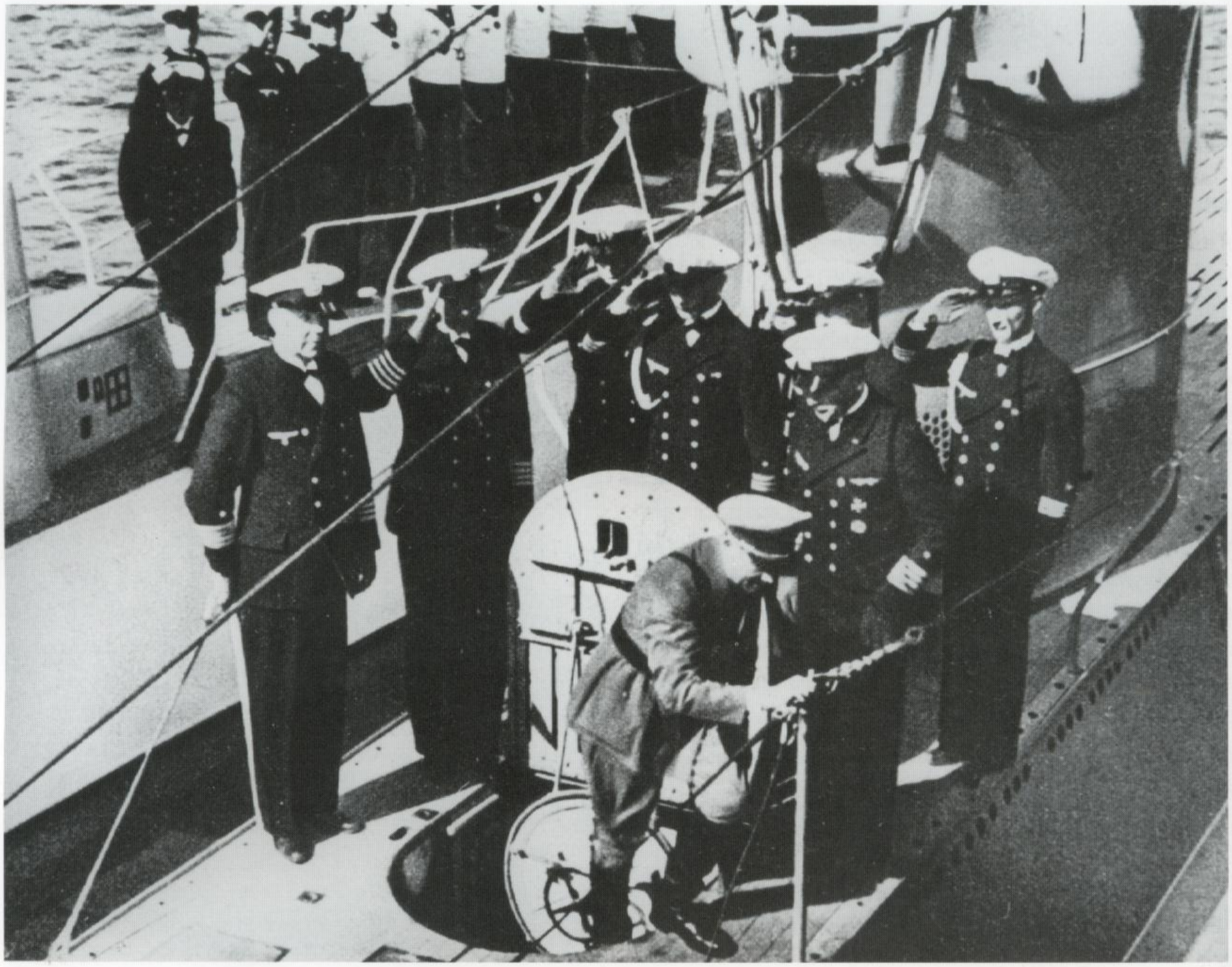
Successes varied. In April only six Allied ships, totalling some 30,900 tons, were sunk, while in June 63 Allied ships were sent to the bottom, some 355,400 tons. In all, 1940 saw the loss of just under 500 Allied ships to U-Boat attacks, around 2,373,000 tons.

This was also the year in which some of the great aces began to make themselves known by their achievements; Prien and Schuhhart had achieved instant fame through the sinking of major enemy warships. Otto Kretschmer, Wolfgang Lüth, Victor Oehrn and Joachim Schepke, to name but a few, joined the ranks of the Ritterkreuzträger, receiving the Knight's Cross of the Iron Cross for running up considerable scores of enemy merchant shipping sunk. July of 1940 also saw restrictions on U-Boat operations lifted: all waters around Great Britain became a war zone in which any merchant shipping was liable to be attacked. The bases in France and occupied Norway also gave the Germans the opportunity to greatly expand U-Boat operations, and Allied shipping was soon being sunk as far afield as the waters off the coast of Africa and off North and South America.

In Germany, returning U-Boat crews were welcomed as heroes. All crews were chosen carefully, with only around ten per cent of all volunteers being accepted as of sufficiently high calibre. It was common practice for the crews to visit their boat while it was still under construction – effectively getting to know their boat inside out. They then trained intensively for at least two months on their new boat once it had been launched. By the time they set off on the boat's first war cruise, the boat and its crew had become a finely honed fighting machine. Each crew member was confident in his own skills, those of his comrades and, most importantly, those of his commander.

At sea the men lived in barely tolerable conditions. The Type VII was approximately 220 feet long and only 20 feet across at its widest point. Into this very limited space, as well as all the essential machinery and equipment, torpedoes, rations and so on, were crammed around 45 men. Each shared his bunk with a comrade, on a rota system: as one left to go on watch, his bedspace would be taken by a comrade

Hitler, known for his dislike of the sea, inspects a small coastal U-Boat some time prior to 1936. Note that the naval officers in attendance all have the plain black leather peaks to their caps; cloth peaks with embroidery were introduced in 1936.



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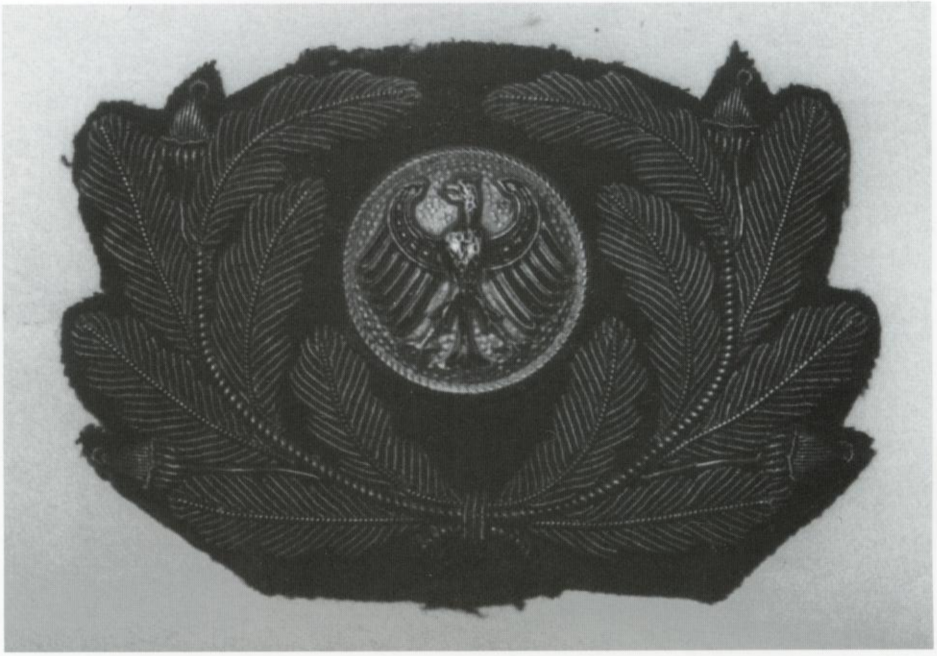
The cap insignia of the Reichsmarine. The gilt wire wreath of oakleaves surrounds a small metal disc with the Reichsmarine eagle in black.



who had just finished his shift. No smoking was allowed on board, and shaving was a rare luxury, as was a proper wash. Special soap was provided for use with sea water, but it was all but useless. Conditions were almost invariably damp, so wet clothes rarely dried properly. Food quickly began to rot, and the atmosphere became foul. On top of all this there were only two toilets, one of which was usually used for storing rations, leaving only one in action – shared by over 40 men!

When they returned home after a war cruise, however, only the best was good enough for the U-Boat man. Special trains were laid on to take them back to Germany for home leave, if required. U-Boat pay, with all its additional allowances, was almost double that received by other sailors, and extensive leisure facilities were made available to the U-Boat crews.

1941

Early in 1941 Dönitz succeeded in persuading Hitler to place a squadron of Focke-Wulf 200 'Condor' long-range maritime reconnaissance aircraft at his disposal (a move which greatly irritated the commander in chief of the Luftwaffe, Reichsmarschall Hermann Göring, who insisted that anything which flew came under his control) in order to help the U-Boats detect enemy convoys.

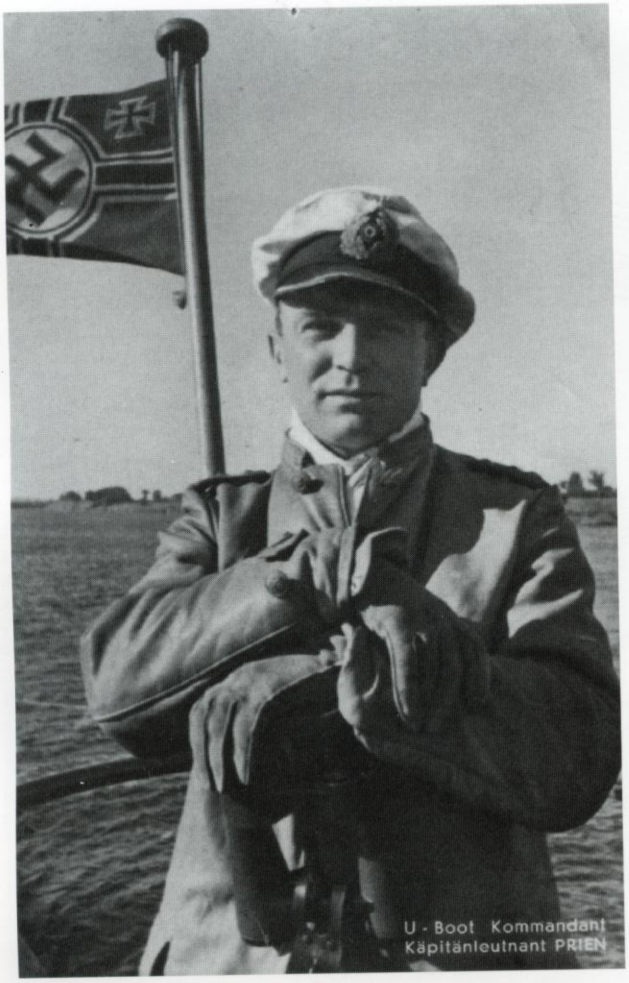
The first of the larger, Type IX, boats (1,120 tons as opposed to the 760 tons of the Type VII) were now coming into service, and having greater effect on long-distance cruises to the South Atlantic waters and beyond.

March was a disastrous month, however, with top aces Kretschmer, Prien and Schepke being lost. Kretschmer and some of his crew were rescued when his U-Boat was sunk, but Prien and Schepke were both killed. U-Boat operations were also opened in the Mediterranean. Some 200 or so new U-Boats were commissioned during the course of the year, and 38 were lost, giving the U-Boot Waffe a net strength of 247 vessels at the end of the year. A total of 445 enemy ships had been sunk, representing 2,171,890 tons.

Despite these successes, Allied use of radar in detection of U-Boats began to pay off, and the entrance of the United States into the war, in December, brought a vast new arsenal of weapons onto the Allied side. The achievements of the U-Boot Waffe had been considerable, however, and in the Mediterranean both the aircraft carrier *Ark Royal* and the battleship *Barham* had been lost.

1942

The entry of the United States into World War Two, in December 1941, saw U-Boats despatched to US



This wartime propaganda photograph shows the 'Hero of Scapa Flow', Kapitänleutnant Gunther Prien, on the conning-tower of his U-Boat, the U–47. He wears the grey leather version of the engine personnel jacket, to which he has added shoulder straps. The strap adjustment to the cuffs can be clearly seen. Prien wears the white top to his peaked cap.

coastal waters, for offensive operations against American ships for the first time. The Americans had virtually no black-out security at this time; harbour lights and ships' navigation lights were both used freely, and radio traffic continued unhindered. Thus the U-Boats had little or no difficulty in finding lucrative target areas. Over 120 ships were sunk during the first three months of the year, and in March the first of the U-Tankers went into action. With fuel resupply now available in the war zone, the effective range of the front-line U-Boat was now almost unlimited. It is estimated that by the end of April over 1,150,000 tons of Allied shipping, representing nearly 200 vessels, had been sunk. In May, however, the Americans began using the convoy system, and tightened up drastically on security. As a result U-Boat successes in American waters tailed off considerably.

Dönitz then changed tack and sent his U-Boats into action against the considerable traffic in oil tankers in the Caribbean, causing great devastation. Here again, however, the Allies quickly adopted convoy tactics, and successes fell away, resulting in Dönitz once again being forced to alter the thrust of his campaign and divert some of his boats into the waters of the South Atlantic. It was here that one of the most tragic incidents of the war at sea occurred.

U–156, under the command of Kapitänleutnant Werner Hartenstein, intercepted and sank the British troopship *Laconia* on 12 September. On hearing the cries of the survivors in the water, Hartenstein began picking them up. He soon realised that the troopship, as well as carrying British troops, had on board Italian prisoners of war and a number of civilians, including women and children. Soon every square foot of the U-Boat was packed with survivors. Some of the Italian prisoners of war had been bayoneted by their Polish guards as they had tried to escape the stricken ship, and they were treated on U–156, as were other survivors who had suffered shark bites while in the water.

Her decks crammed with survivors, U–156 was in no position to dive, and although two other U-Boats, an Italian submarine and two Vichy French warships were despatched to aid in the rescue operation, Hartenstein took the risky step of broadcasting in clear, giving his exact position and guaranteeing not to attack any ships that would help with the rescue.

U–506 and U–507 arrived on the scene and took on a number of the survivors, leaving U–156 engaged in gathering up the numerous scattered lifeboats in preparation for the arrival of the French warships. On the fourth day after the sinking, an American B–24 Liberator bomber appeared. Hartenstein ordered a large Red Cross flag to be draped over his gun position to show his good intentions, and signalled to the bomber that he had rescued Allied personnel on board. Then an RAF officer who had been rescued took the signalling lamp and repeated the message, adding that there were women and children on

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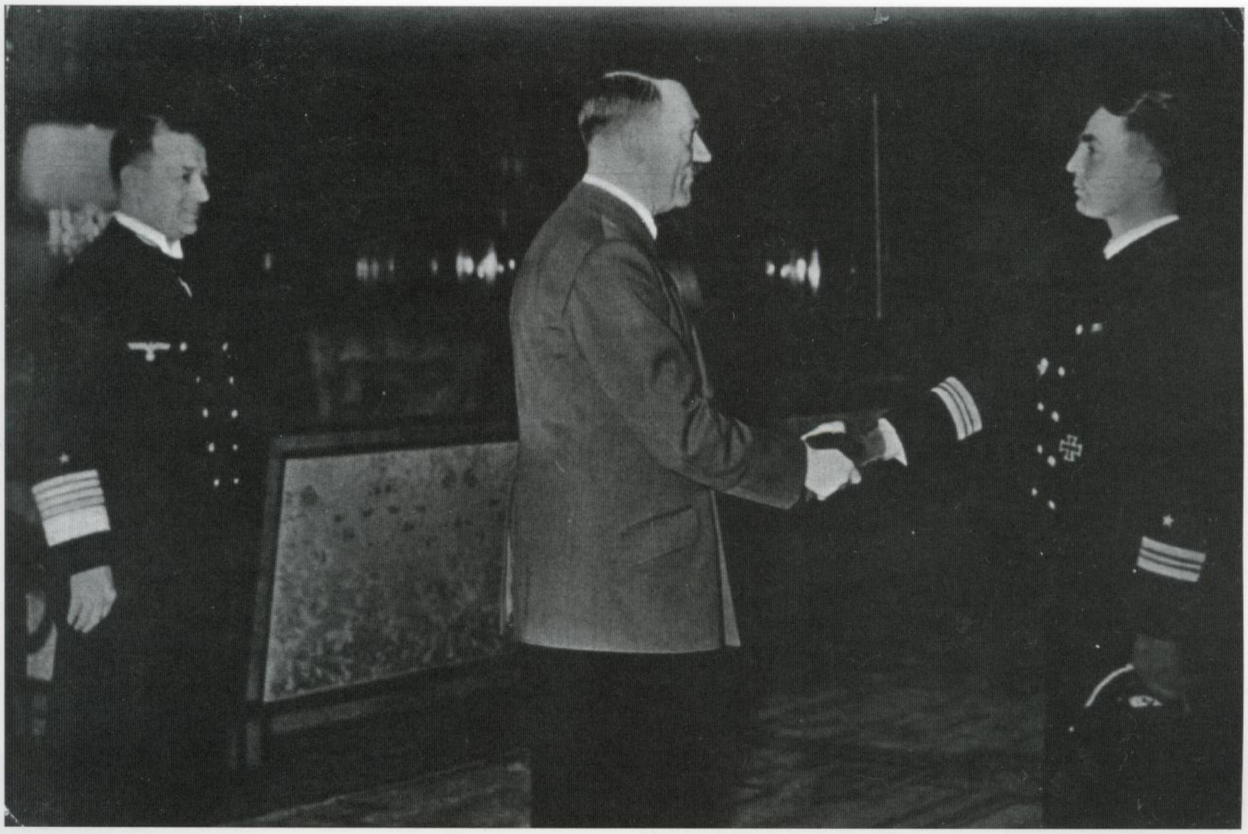


Kapitänleutnant Prien at the investiture of his Knight's Cross. With Grossadmiral Raeder looking on, he shakes hands as his Führer congratulates him on his exploits. Note that when on shore, in normal service dress, the white top is not worn on his peaked cap.

board. Despite this, the B–24 attacked, dropping bombs which killed a number of the survivors. The plane then departed, returned to its base, rearmed, and returned to attack the U–156 again, causing further deaths and damage to the U-Boat. Hartenstein was left with no option but to abandon the rescue, and reluctantly ordered the survivors on board U–156 to return to the *Laconia*'s lifeboats, whereupon he left the scene before his boat could be attacked again. It was later discovered that the pilot of the B–24 had understood the messages flashed to him from the bridge of the U–156, but had nevertheless been ordered to press home his attack on the grounds that the U-Boat still posed a potential threat to Allied shipping. The survivors from the *Laconia* had been considered expendable.

Dönitz furiously ordered that never again should one of his U-Boat commanders put his boat and his crew at risk in a rescue operation.

That year U-Boat production hit 238; with 88 lost, net strength was boosted to 397 boats. Well over a thousand enemy ships had been sunk, representing almost six million tons. It was a total which would never again be reached as Allied anti-submarine measures became ever more effective and U-Boat losses grew. The 'Happy Time' was over.

1943

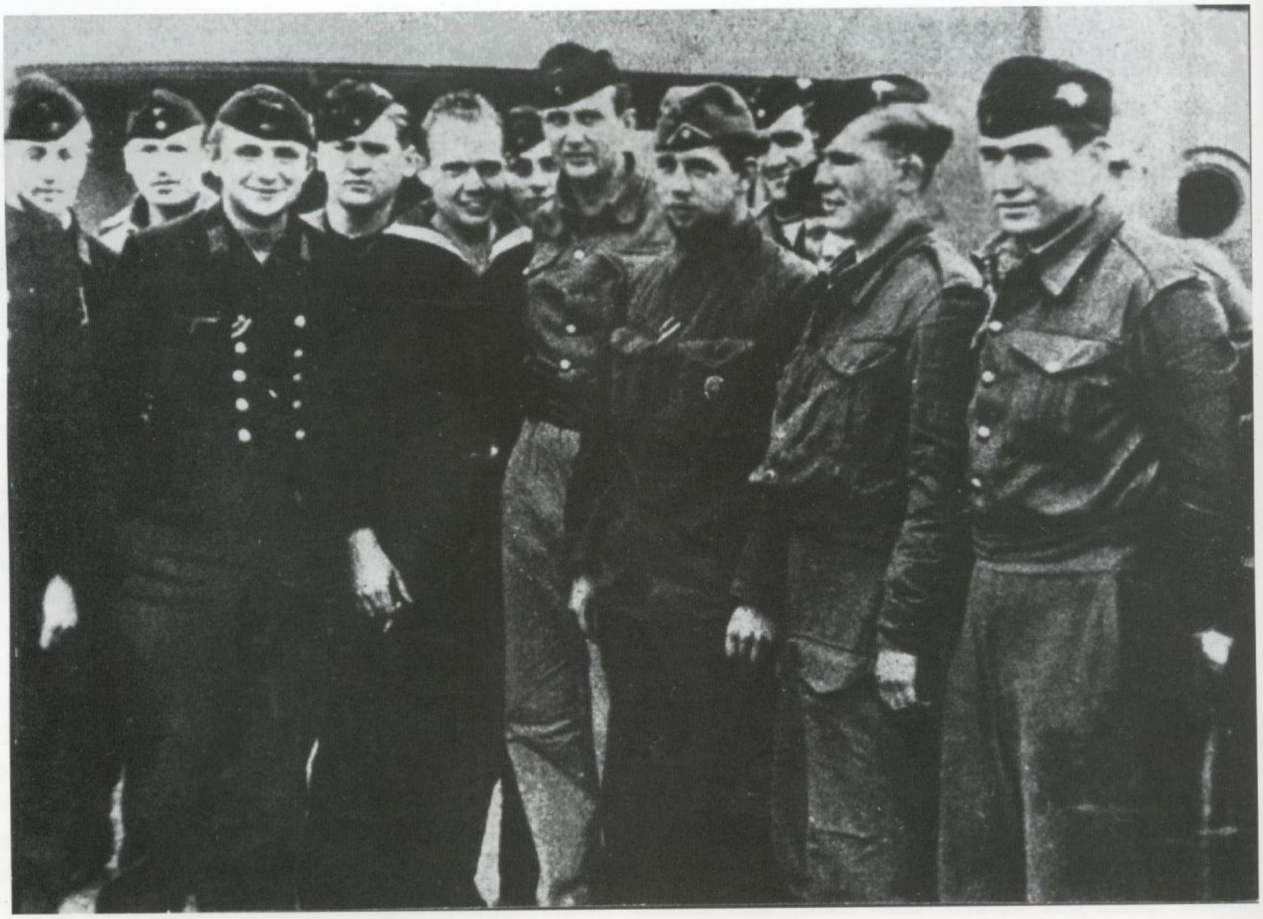
The beginning of 1943 saw the Allies launch massive bombing attacks both on the U-Boat bases and on the shipyards where they were constructed. At sea, however, successes against the Atlantic convoys by U-Boat wolf-packs continued. On 16 and 17 March convoys HX–229 and SC–122 came under attack by wolf-packs: 22 Allied ships were sunk, but just one U-Boat lost. Dönitz was ecstatic, but his joy would not last, for this was to be the high point of the U-Boat war; the tide turned.

Although the Allies had known of the Enigma encoding device since before the war, it was only in May 1941, after Kapitänleutnant Fritz Julius Lemp's

U–110 was attacked and disabled by British escort vessels, that the latest improved version, as supplied to the Kriegsmarine, fell into British hands. Scuttling charges intended to sink the U-Boat had failed to explode, thus allowing a British boarding party to recover the Enigma machine, as well as a copy of the latest codes. The British were now able to intercept all messages between Dönitz and his U-Boats. The location of each U-Boat, its destination and its intended target all became known to the Allies; needless to say, U-Boat losses rocketed.

The Enigma device was, however, only part of the answer: the codes were also needed, and each time the enemy changed the codes, it took time for British intelligence to crack the new codes; in this period, U-Boat successes would mount once again. By 1943, however, despite the introduction of an improved version of the machine, it was taking British intelligence less than two weeks to crack the new codes. This success, together with new anti-submarine measures such as Hedgehog (a multi-barrelled mortar), acoustic torpedoes dropped by aircraft which homed in on the sound of the U-Boats' engines, detection devices which picked up on the U-Boats' magnetic fields, and, above all, massive strength in escorting ships and aircraft, sounded the death knell for the U-Boats. In May 1943, from over 30 U-Boats sent into action against the Atlantic convoys, almost a third were lost without having fired a single torpedo.

Dönitz reluctantly ordered his U-Boats withdrawn from operations in the North Atlantic. During 1943 some 290 new U-Boats were launched, but losses were very heavy, at 245. Although some 451 enemy ships had been sunk, totalling 2,395,500 tons, this was less than half the number of the previous year.



The seaman second from right in this photograph wears captured British battledress, as apparent from the large patch pocket on the left leg of the trousers.

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1944

U-Boat activity was drastically curtailed by 1944, though in the Mediterranean, U-Boats saw action against the Allied invasion fleet at Anzio.

The installation of snorkel equipment in U-Boats allowed them to recharge their batteries while still under water, thus improving their chance of avoiding detection by Allied ships or aircraft. However, it was a case of too little, too late.

A far more important development was the launching of the first Type XXI U-Boat, in April. This new vessel was much larger than the Type VII or Type IX and featured such luxuries as refrigerated food storage and automatic loading devices for the torpedo tubes. Unfortunately the need to retrain crews for service in these technically advanced vessels delayed their introduction into combat service until it was too late.

The Allied invasion of Normandy, in June 1944, heralded the end of the U-Boat bases in France. By August all U-Boats in France had been withdrawn to bases in Norway. In September U-Boats were withdrawn from the Mediterranean, and those based in the Black Sea were scuttled. For the first time U-Boat losses exceeded new launchings, with 264 being sunk and only 230 commissioned. Only 131 Allied ships, totalling some 701,900 tons, had been sunk.

1945

In the last few months of the war U-Boat operations were once again concentrated where they had been when war broke out – in British coastal waters.

Although some dozen or so Type XXI U-Boats were ready for action by the end of the war, only one saw combat action: U–2511, commanded by Korvettenkapitän Adalbert Schnee. It intercepted a powerful British surface force, including a heavy cruiser with its attendant escorting screen of destroyers. Schnee's U-Boat passed through the escorts undetected, and set up a dummy attack on the cruiser, which went off perfectly. Unfortunately for Schnee, the order to cease hostilities had already been given, and he was obliged to allow his target to pass unmolested.

In the first five months of the year 93 U-Boats were commissioned, but 399 were sunk. Only 71 Allied ships, representing around 332,600 tons, were sunk.

Despite the dwindling successes in the last two years of the war, the U-Boats had achieved a great deal. A total of over 2,800 enemy ships had been sunk – over 14 million tons. Despite the horrendous losses suffered, the fighting spirit of the U-Boot Waffe was never crushed. Of around 35,000 men who served in U-Boats, well over 28,000 – over 80 per cent – lost their lives. Although they were deadly adversaries, and were hunted down with great determination, the men of the U-Boot Waffe earned the respect of their enemies, and visitors to the U-Boat memorial at Möltenort today will still find wreaths and tributes from the navies of former adversaries.

Table A: Tonnages sunk

The Great Aces	Tonnage sunk
Kapitänleutnant Lothar Arnauld de la Periere	453,700*
Kapitänleutnant Walther Forstmann	384,300*
Kapitänleutnant Max Valentiner	299,300*
Korvettenkapitän Otto Kretschmer	263,600
Kapitänleutnant Otto Steinbrink	231,614*
Korvettenkapitän Wolfgang Lüth	228,400
Kapitänleutnant Hans Rose	213,900*
Fregattenkapitän Victor Schutze	212,000
Korvettenkapitän Erich Topp	184,200
Kapitänleutnant Walther von Schwieger	183,800*

The Most Successful U-Boats	Tonnage sunk
U–35	535,900*
U–39	398,500*
U–48	318,100
U–38	292,200*
U–34	258,900*
U–99	244,600
U–103	231,100
U–124	218,200
U–107	217,700
U–53	217,500*

Note: The total tonnages sunk by individual U-Boats may represent cumulative scores achieved by more than one commander during the U-Boat's service.
*Commanders and U-Boats of the Kaiserliche Marine.
It should be noted that although it appears that the U-Boat commanders of the Kaiserliche Marine were far more successful than their counterparts in the Kriegsmarine, they operated during the early development of U-Boat warfare, when Allied anti-submarine measures were less effective. The U-Boat commanders of the Kriegsmarine faced a much better equipped and more dangerous enemy.

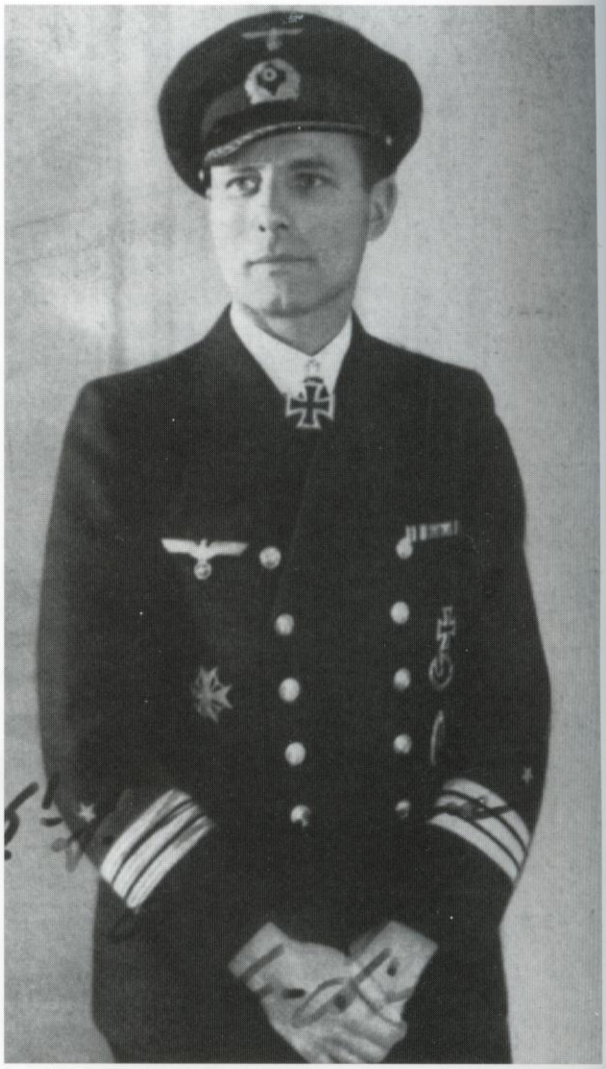
ORGANISATION AND COMMAND STRUCTURE

Supreme command of the U-Boats lay with Adolf Hitler in his capacity as *Oberbefehlshaber der Wehrmacht*, or *commander in chief armed forces*. Directly beneath Hitler in the chain of command came the supreme commander in chief navy, or *Oberbefehlshaber der Marine*, a post held initially by Grossadmiral Erich Raeder and later by Grossadmiral Karl Dönitz.

Answering to the Supreme C-in-C navy was the naval high command or *Oberkommando der Marine (O.K.M.)*, which was subdivided into several branches – administration, construction, operations and so on.

Operational U-Boat Flotillas

1	**U–Flotille**	(Weddigen) Based in Germany and later in France.
2	**U-Flotille**	(Salzwedel) Based in Germany and later in France.
3	**U-Flotille**	(Lohs) Based in Germany and later in France.
4	**U-Flotille**	A training unit based in home waters.
5	**U-Flotille**	(Emsmann) Based in Germany.
6	**U-Flotille**	(Hundius) Based in Germany and later in France.
7	**U-Flotille**	(Wegener) Based in Germany, then France, then Norway.
8	**U-Flotille**	A training unit based in home waters.
9	**U-Flotille**	Based in France.
10	**U-Flotille**	Based in France.
11	**U-Flotille**	Based in Norway.
12	**U-Flotille**	Based in France.
13	**U-Flotille**	Based in Norway.
14	**U-Flotille**	Based in Norway.
18	**U-Flotille**	Formed in early 1945.
19, 20, 21, 22, 23, 24, 25, 26 and 27	**U-Flotille**	Training units based primarily in home waters.
29	**U-Flotille**	Based in France and in Italy.
30	**U-Flotille**	Based in the Black Sea.
31	**U-Flotille**	A training unit based in home waters.
32	**U-Flotille**	A training unit based in home waters.
33	**U-Flotille**	Based in Germany and also in the Far East, including Japan.



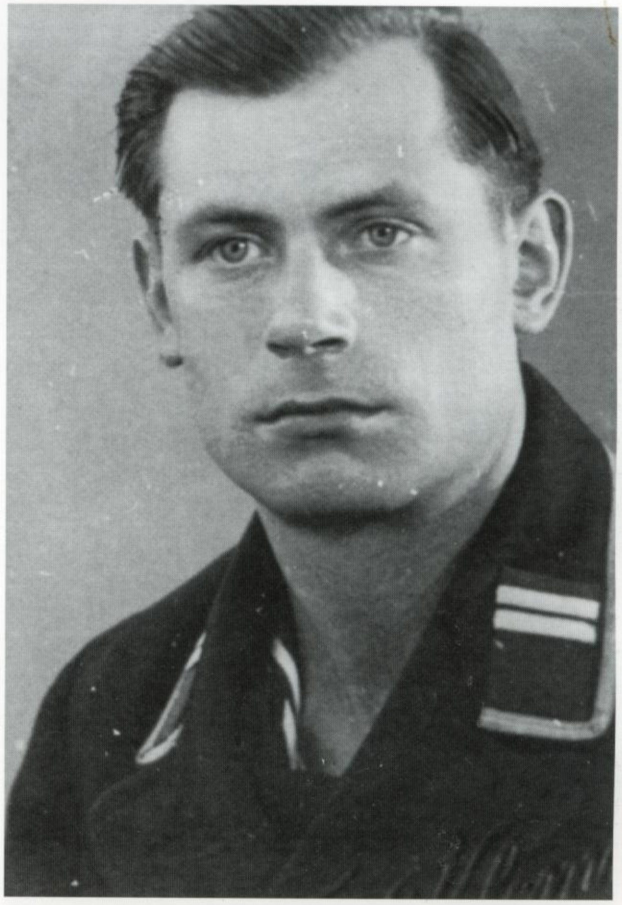
A fine study of naval officers' service dress, worn here by Korvettenkapitän KarlFriedrich Merten, holder of the Knight's Cross of the Iron Cross with Oakleaves and the U-Boat Badge with Diamonds. On the right breast of his reefer jacket can be seen the Spanish Cross in Silver, indicating his participation with the German naval patrols during the Spanish Civil War.

Next in line came the C-in-C U-Boats or *Befehlshaber der U-Boote (Bd U)*, initially Karl Dönitz. After Dönitz succeeded Raeder as C-in-C navy, he retained his interest and overall command of the U-Boats.

U-Boat command was divided into the operational department commanded by Admiral Eberhard Godt and the organisational department commanded by Admiral Hans-Georg von Friedeburg.

U-BOAT UNIFORMS

The German naval uniform has altered little during the course of this century. Apart from dispensing with items such as the frock-coat and the bicorn hat, the basic uniform of today still very much resembles those of the two world wars. To avoid unnecessary and space-consuming duplication in the text, rather than deal with each detail of the Kaiserliche Marine, Reichsmarine and Kriegsmarine uniforms separately, each uniform garment will be dealt with once, and any important differences between the uniforms of each era will be highlighted. For a fuller study of the uniforms of the Kriegsmarine period the reader is recommended the excellent three-volume work *Uniforms and Traditions of the Kriegsmarine* by John R. Angolia and Adolf Schlicht (R. James Bender Publishing, California).



The collar and collar patch details of the pea jacket are clearly shown here. The 2 cm-wide gilt braid collar edging is complemented by two strips of gilt braid on the cornflower blue collar patch, showing the wearer to be a chief petty officer.

The photograph shows Heinrich Böhm, veteran of the pocket battleship Admiral Graf Spee, *the destroyer* Diether von Roeder *and of the U-Boot Waffe; he became Torpedoobermechaniker on U–377. (Jak P. Mallmann Showell)*

Tunics and Trousers

The Reefer Jacket

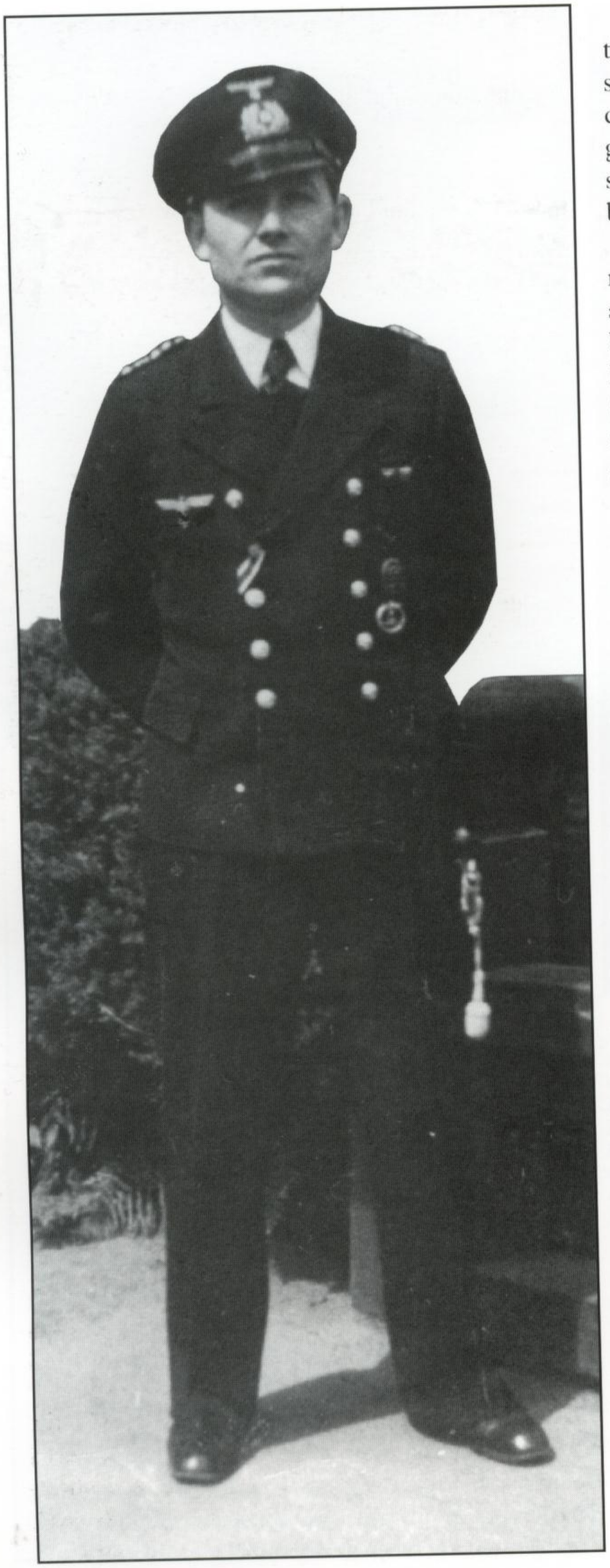
The normal service dress of officers and warrant officers was the reefer jacket. Though much of the blue issue clothing was eventually not worn by U-Boat crews at sea, photographic evidence shows that the top part was worn on many occasions, though not always with the regulation trousers or footwear.

The reefer jacket was cut from fine dark blue woollen worsted or doeskin-type cloth, double-breasted with open collar and lapels in traditional style. It featured two internal skirt pockets with external flaps, and one internal breast pocket, on the left side, without a flap. The jacket had a double row of five gilt metal anchor motif buttons (many of the reefer jackets of the Imperial Navy only featured four pairs), the top pair of which were set slightly wider than the others and were usually for decoration.

Rank for officers was displayed by means of sleeve rings in gilt metallic wire braid: For Leutnant, a single broad ring; for Oberleutnant, two broad rings; for Kapitänleutnant, one narrow ring sandwiched between two broad rings; and for Korvettenkapitän, three broad rings. The majority of U-Boat commanders had the rank of Kapitänleutnant; those of higher rank usually had shore postings as flotilla commanders and so on.

Above the sleeve rings was a gilt wire emblem indicating the officer's career branch. For line officers this was a five-pointed star; for engineering officers a cogwheel; for Kaiserliche Marine officers it was a gilt-wire embroidered Hohenzollern crown, which was replaced by the five-pointed star after the abolition of the monarchy.

For officers and warrant officers of the Kriegsmarine, the right breast of the jacket featured the national emblem of eagle and swastika embroidered either in fine gilt wire or yellow cellulose cord. (The gilt wire tarnished very quickly in salt air.)



The reefer jacket as worn by warrant officers, here Dieselobermaschinist Jakob Mallmann. Note the shoulder straps which display his rank and the warrant officer grade peaked cap. The U-Boat war badge is worn on the left breast, and the naval dagger with portepee is also worn. (Jak P. Mallmann Showell)

Warrant officers had no sleeve rings; instead, their rank and trade were displayed by means of shoulder straps. These were in dark blue cloth with 2 cm-wide gilt braid edging. In the centre was a small gilt anchor motif with, where appropriate, a trade symbol superimposed on it. Specific rank was shown by small aluminium rank pips.

Buttons on all naval jackets bore a fouled anchor motif (an anchor with a rope twisted round its shank) and the edge of the buttons had a twisted rope-effect border. Imperial era buttons also featured the Hohenzollern crown above the anchor. The buttons for the field grey and tropical clothing lacked the rope-effect border and had a field grey or tan painted finish.

The reefer jacket was to be worn with a white shirt and black tie.

The Pea Jacket

The pea jacket was normal service dress for lower ranks during the cooler months, and was the junior ranks' equivalent of the greatcoat. It was cut from heavy-quality dark blue melton cloth, was double-breasted and, like the reefer jacket, featured two flapped skirt pockets.

The pea jacket was sometimes known as the *Collani*, after a well-known German naval outfitters. It was worn over the traditional sailor's pullover shirt, and featured a double row of five gilt metal anchor buttons (in some late World War Two examples the buttons were simply painted plastic). Early pea jackets had six pairs of buttons; the change to five was made in 1933. As with the reefer jacket, the top pair of buttons was not actually used, and were concealed by the lapels of the jacket.

Collar patches were worn with the pea jacket. For lower ranks they were in plain blue (which varied from a royal blue to a dark blue only a few shades lighter than the pea jacket itself). Petty officers had a single strip of gilt braid and chief petty officers two strips of gilt braid. For both petty officer grades the

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On the right breast of the Kriegsmarine pea jacket was the eagle and swastika national emblem, machine- or hand-embroidered in golden yellow yarn.

Rank and trade were indicated by a series of arm badges. For lower ranks this comprised the trade symbol with rank chevrons, where appropriate. For petty officers it comprised a large fouled anchor with the trade symbol superimposed on it, where necessary, and for chief petty officers, a single chevron below this insignia. The badges were golden yellow cotton embroidery on dark blue cloth. Petty and chief petty officers, however, could privately purchase fine gilt metal examples of their badges.

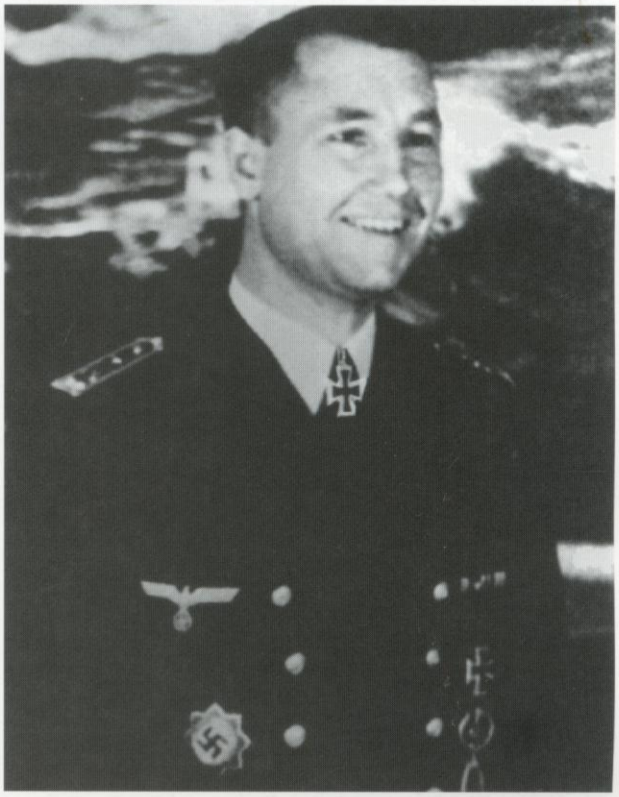
Petty and chief petty officers of the Imperial Navy wore the Imperial Hohenzollern crown above the anchor of their insignia. Below the crown could be worn a trade speciality insignia. A wide range of these were produced, in red embroidery on dark blue to indicate the wearer's speciality within his trade branch.

The Parade Jacket

The parade jacket was an extremely smart form of formal wear for full-dress occasions – parades, award ceremonies and so on. It had a short, waistcoat-type body, which closely resembled that of the officer's mess jacket, and was commonly referred to as the *Affenjacke*, or 'monkey jacket'. It was made from fine-quality doeskin-type wool and was single-breasted, fastened by a pair of small gilt anchor buttons linked by a gilt metal chain. The buttons were just at the base of the lapels.

At roughly the centre of each front panel was a vertical row of nine small gilt metal anchor buttons. On each cuff was a small strip of dark blue cloth bearing a further five such buttons. The cuff of the parade jacket for petty officer and chief petty officer ranks was decorated with 2 cm-wide gilt metallic braid.

Thus far, apart from the additional Hohenzollern crown motif to the buttons of the Imperial era parade jacket, the styles worn during the Imperial, Weimar and Third Reich eras were all but identical.



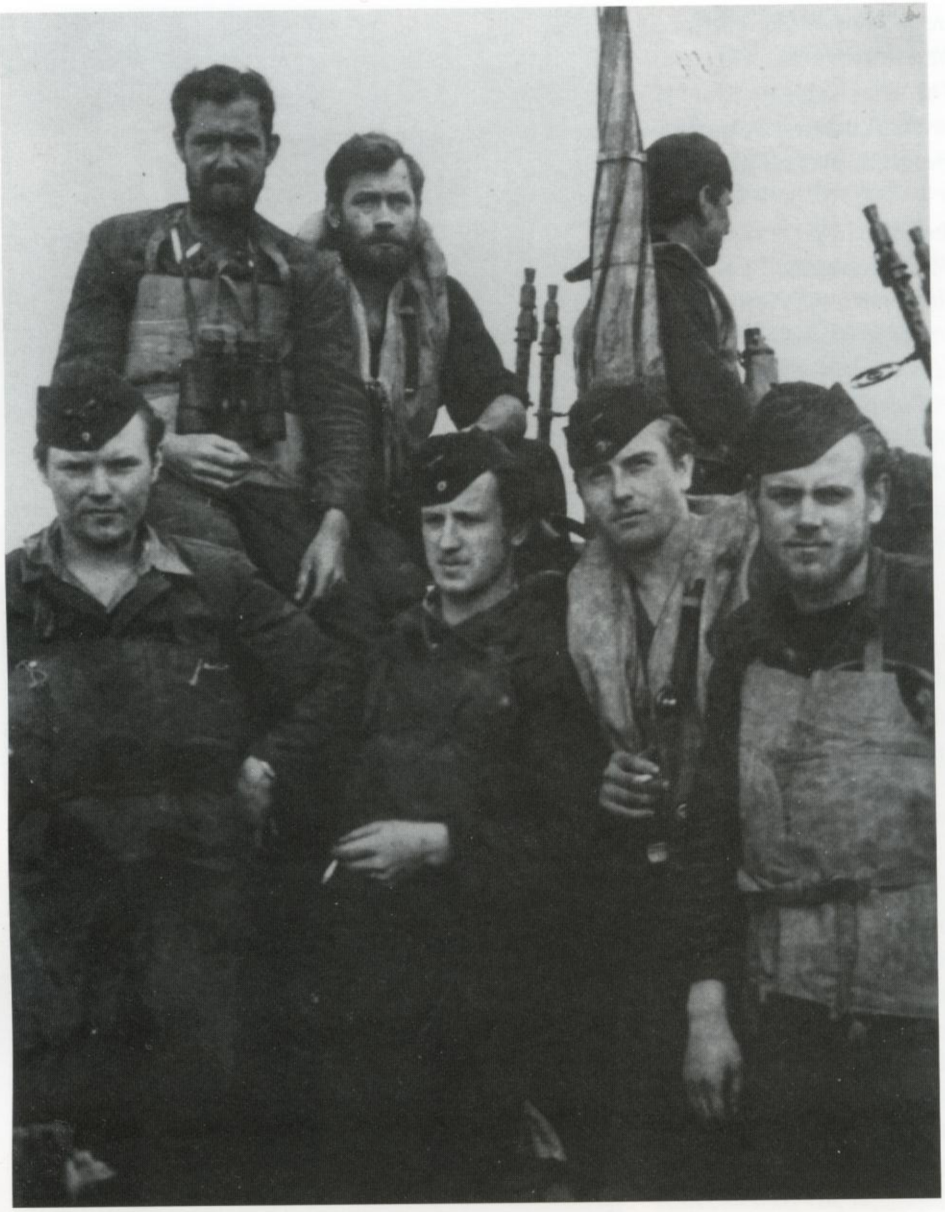
Stabsobermaschinist Heinrich Dammeier, one of the very few non-commissioned U-Boat personnel to win the Knight's Cross. The award was won on 12 August 1944 while he was serving on U–270. Note the German Cross in Gold on the right breast. The U-Boat war badge can just be seen below the Iron Cross on the left breast. (Dammeier)

Kriegsmarine parade jackets featured the eagle and swastika national emblem on the right breast, just above the level of the top button. Rank and trade insignia were worn on the left sleeve, in exactly the same fashion as for the pea jacket. The parade jacket was worn over the traditional sailor's pullover shirt, but unlike the pea jacket, the sailor's collar, or *Kieler Kragen*, was worn outside the jacket.

The Pullover Shirt

In the German navy, as in most navies of the world, the traditional service dress of lower ranks was the pullover shirt. This was in effect a three-part outfit comprising the shirt itself, the sailor's collar and a black silk neckerchief.

The pullover shirt was a close-fitting garment made from warm dark blue wool. It had slit cuffs with button fastenings. The front opening of the shirt, which reached half-way down the chest, was



Crew members of U–377 on the bridge of the U-Boat. Note the twin machine-guns for anti-aircraft defence just visible in the background. Second from left in the back row is Torpedoobermechaniker Heinrich Böhm. (Jak P. Mallmann Showell)

tied with two cornflower blue cords which were then tucked inside the shirt. The shirt itself featured a dark blue flap collar over which the *Kieler Kragen* was worn.

The eagle and swastika emblem on Kriegsmarine shirts was woven in golden yellow artificial silk on a dark blue backing. Rank, trade and specialist insignia were worn on the left sleeve, in the same manner as for the pea jacket and the parade jacket, with the exception that gilt metal badges could not be worn on the shirt.

Although apparently not a particularly suitable form of dress for wear on board a submarine, photographs show that it was sometimes worn.

A white summer version of this shirt was also produced, with contrasting cornflower blue cuffs and an insignia in blue on a white backing. The white pullover shirt would normally be worn by U-Boat crews in conjunction with the parade jacket only for ceremonies or on parade.

Trousers and Footwear for the Blue Uniform

Trousers worn by officers and warrant officers with the reefer jacket were normally of the same fine-

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quality dark blue material, and had plain 60 cm-wide bottoms. They had a fly front, with button fastening, buttons on the waistband to take braces, two side pockets and a rear pocket on the right side.

Officers and warrant officers were permitted to wear just about any suitable lace-up shoe in plain black leather. A heavier shoe, really an ankle-boot, was also occasionally worn. As the leg of this boot was covered by the trouser leg, it is almost impossible in most photographs to tell whether shoes or ankle-boots are being worn.

Ranks up to chief petty officer wore the traditional sailor's trousers, cut in dark blue melton cloth and with a flap rather than a fly front. The legs had 60 cm-wide bottoms and were cut to be 2 cm narrower at the knee. German sailor's trousers were pressed with a normal front and back vertical crease rather than the horizontal creases traditional in the Royal Navy. When worn as part of the landing rig, the trouser legs were rolled up slightly, exposing the shafts of the sea-boot.

Normal footwear with the sailor's trousers was the ankle-boot or sea-boot, the latter being similar to the German army jackboot but with a cork lining to the sole.

The Work Shirt

Similar in cut to the standard pullover shirt, the work shirt was cut from heavy-duty white moleskin cloth and was fitted with a large patch pocket on the right breast. They had no national insignia or rank insignia, but if required, the *Kieler Kragen* and black silk neckerchief could be worn. Matching white heavy-duty moleskin work trousers were to be worn with this shirt. The whole uniform had to be very hard-wearing as it invariably became filthy and had to withstand repeated washing.

The White Summer Tunic

Photographs show U-Boat officers wearing this tunic when on service in the tropics, though it would not normally be worn on board ship. Several U-Boats operated in Pacific waters, from Japanese-controlled bases, and the white uniform was often worn on shore as standard service dress.

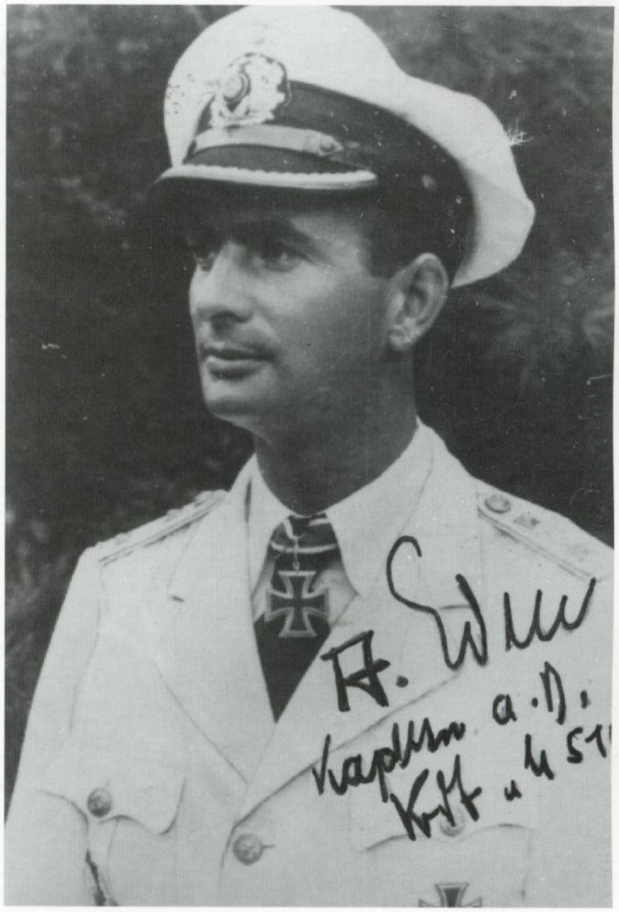
The tunic was single-breasted with an open collar and pleated patch pockets on the breast and skirt. The front was fastened by four gilt metal anchor motif buttons. The cuffs were plain.

On Kriegsmarine issue tunics a gilt metal pin-backed eagle and swastika emblem was worn over the right breast pocket. No sleeve rings were worn on this tunic; rank was displayed by means of shoulder straps. All insignia, including buttons, had to be removable to facilitate cleaning.

Matching white trousers were to be worn with the tunic, along with a white shirt and black tie. As often as not, white shoes were also worn.

The Work Jacket

The work jacket, intended for use by junior NCO grades, was widely used by U-Boat personnel. It was a single-breasted jacket with plain patch pockets on the skirt. The pockets had no flaps. It was cut from



Kapitänleutnant Alfred Eick, commander of U–510. Eick was awarded the Knight's Cross on 31 March 1944. In this photograph he wears the white summer tunic and white top to his peaked cap. Unusually, no breast eagle is worn on the tunic.

greyish-green hard-wearing drill fabric and fastened by four plain plastic four-hole-type buttons, with the top button usually left unfastened. It often, though not invariably, featured the eagle and swastika emblem on the right breast. Near to the bottom of each sleeve was a small button-fastened strap for adjustment.

The Field Grey Uniform

All naval personnel, no matter what their intended final branch of service, underwent a period of basic military training, which included learning basic infantry skills. During this period, the field grey uniform was worn.

The field grey naval blouse was very similar to that of the German army, and indeed some stocks of army clothing were used by naval personnel. The naval version usually featured a plain field grey collar. There were four pockets – two pleated patch pockets on the breast and two flapped slash pockets on the skirt. The blouse was single-breasted and fastened by five buttons bearing the anchor motif and painted field grey.

The eagle and swastika emblem was worn over the right breast pocket, and was either machine-woven or machine-embroidered in golden yellow thread on a field grey or dark green base. Collar patches were in army style: two bars of mouse grey litzen with a yellow stripe to the centre of each and the space in between the bars in white.

While undergoing basic training, shoulder straps were not worn, since the trainee was not then considered a qualified soldier. For those destined for a seagoing career, this was the only time they were likely to wear the field grey naval uniform.

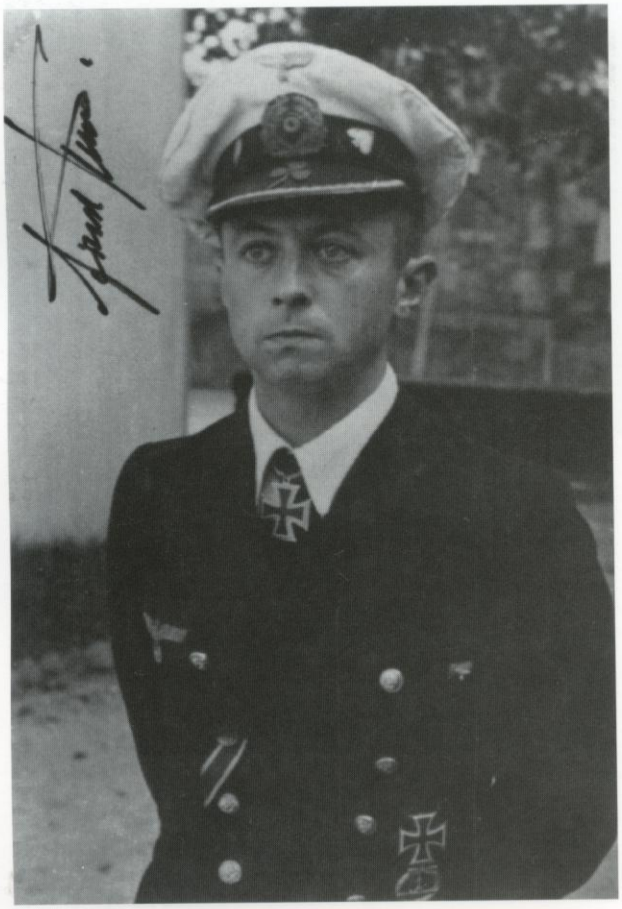
Field grey or stone grey trousers were worn with the field grey blouse. Footwear consisted of the jackboot, with the ends of the trousers tucked into the shaft of the boot, or ankle-boots and gaiters.

Tropical-Issue Uniform

Not specifically intended for U-Boat personnel, but widely worn by them, was the tropical-issue uniform. Its tunic was cut from a brownish-tan denim-type drill material, and was single-breasted with a five-button fastening and pleated patch pockets to the breast and skirt of the tunic. The collar could be fastened at the neck, but was almost invariably worn open. The pockets featured scalloped flaps, and all the buttons on the tunic were of the same style as those for the field grey dress but painted a tan colour. Above the right breast pocket was the eagle and swastika in golden yellow yarn on a tan backing.

Shoulder straps were worn to indicate rank. Those for officers were of the same pattern as on the white summer tunic, while those for NCOs and lower ranks were cut from the same dark tan-coloured material as the jacket itself, and had blue rather than gilt braid edging for NCOs, where appropriate. The sleeves had false turn-back cuffs.

A tropical shirt was also issued. This was a pullover type, with four-button fastening to the



Korvettenkapitän Ernst Bauer was decorated with the Knight's Cross on 16 March 1942 as commander of U–126. The photo shows him as a Kapitänleutnant. He wears the blue reefer jacket and the peaked cap with white top. Of interest are the badges pinned to the band of his cap and the three-leafed clover on the peak of the cap. Such unofficial insignia were very popular among U-

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slash. It had two pleated patch breast pockets and loops sewn to the shoulder seams to accommodate shoulder straps. An eagle and swastika breast badge, identical to that on the tunic, was positioned over the right breast pocket.

For wear with the tropical tunic or shirt, both long and short trousers were produced. The long trousers had belt loops fitted, two slash side pockets with button fastening and a rear pocket on the right side. The short trousers had similar belt loops and pockets, but also had a small fob pocket to the right front panel. They were intended to be worn to just above the knee, but were often shortened considerably.

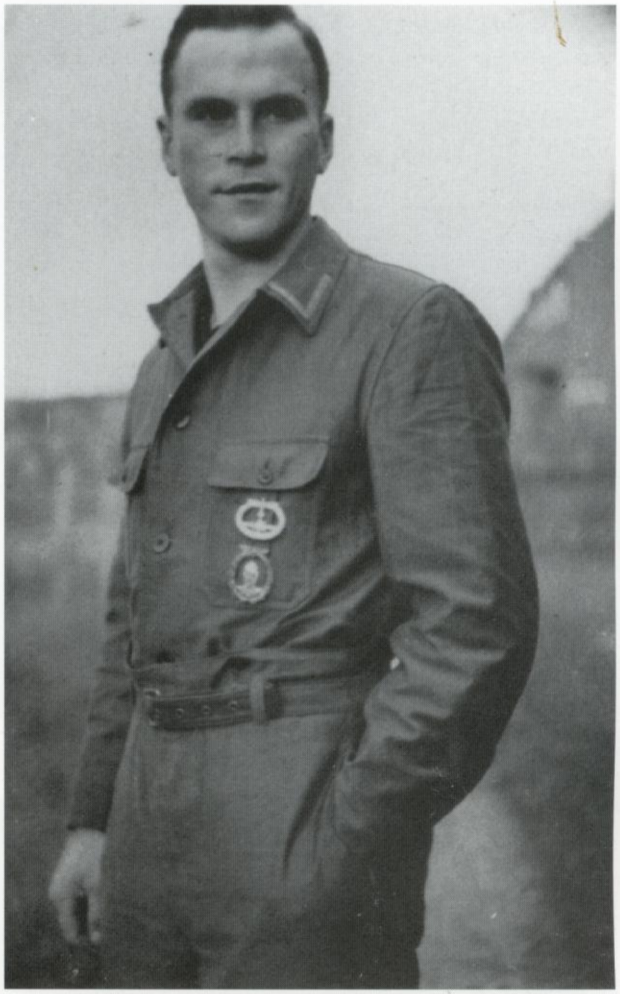
U-Boat Battledress

A special uniform, closely resembling British battledress, was issued to U-Boat crews for wear at sea, and from photographic evidence it seems to have been the most popular of all forms of clothing among U-Boat personnel. The blouse was a short, waist-length garment cut from greyish-green denim-type drill material and fitted with pleated patch breast pockets. The pockets usually have a straight-cut flap. The single-breasted jacket was fastened with five buttons, and the cuffs of the blouse sleeves were slit, with button fastening.

The blouse featured a waistband, with a long tail-piece to one side, which formed the tongue of a belt attachment. This passed through a friction buckle to the other side of the waistband. There seems to have been little or no standardisation on the fittings which accompanied this blouse. Examples show field grey or tropical brown painted buttons, with plain black plastic four-hole-type buttons, or with the gilt metal anchor buttons from the blue uniform. Shoulder straps and breast eagles were worn as often as not. Petty and chief petty officers often wore a small chevron of gilt braid (sometimes gilt metal) on the 'point' of the collar. The blouse could be fastened up to the neck, but the top button was almost always left unfastened.

Trousers were of identical material and featured belt loops to carry a cloth belt with a friction buckle. The bottom of each leg had a button-down adjusting strap.

It should also be noted that considerable stocks of British lightweight denim battledress were captured after the fall of France, and were put to good use by U-Boat crews since they closely resembled the German pattern. In wartime black-and-white photographs it can be difficult to detect which is being worn. There are, however, one or two clues: British battledress invariably has scalloped flaps to the pockets, whereas German-made pieces usually (though not always) carried straight-cut flaps; the cuffs to German blouses were slit, with button fastenings, whereas British blouses featured distinct wristbands; and finally, the trousers for British battledress had a large patch pocket just above the knee on the left leg.



The standard German-made U-Boat battledress-type clothing in greyish-green denim-type drill material, worn with no insignia and with plain black plastic buttons. Note, however, the petty officer grade braid worn on the 'points' of the collar. The U-Boat war badge is being worn, above the Minesweeper war badge. (Jak P. Mallmann Showell)

Although the ankle-boot was occasionally worn with this form of dress, it seems that the most popular form of footwear on U-Boats was the canvas shoe. It had a sole made from leather or composite material and canvas uppers which were reinforced at the heel, side and toe by leather or composite material. These were both comfortable, practical, and quiet to move about in – essential when the U-Boat was rigged for silent running.

Leather Clothing

Two specific forms of leather jacket were produced for naval personnel, and both were widely used by U-Boat crews. Those worn by the Kriegsmarine were virtually indistinguishable from those worn in the Kaiserliche Marine apart from the buttons of the latter bearing the Hohenzollern crown.

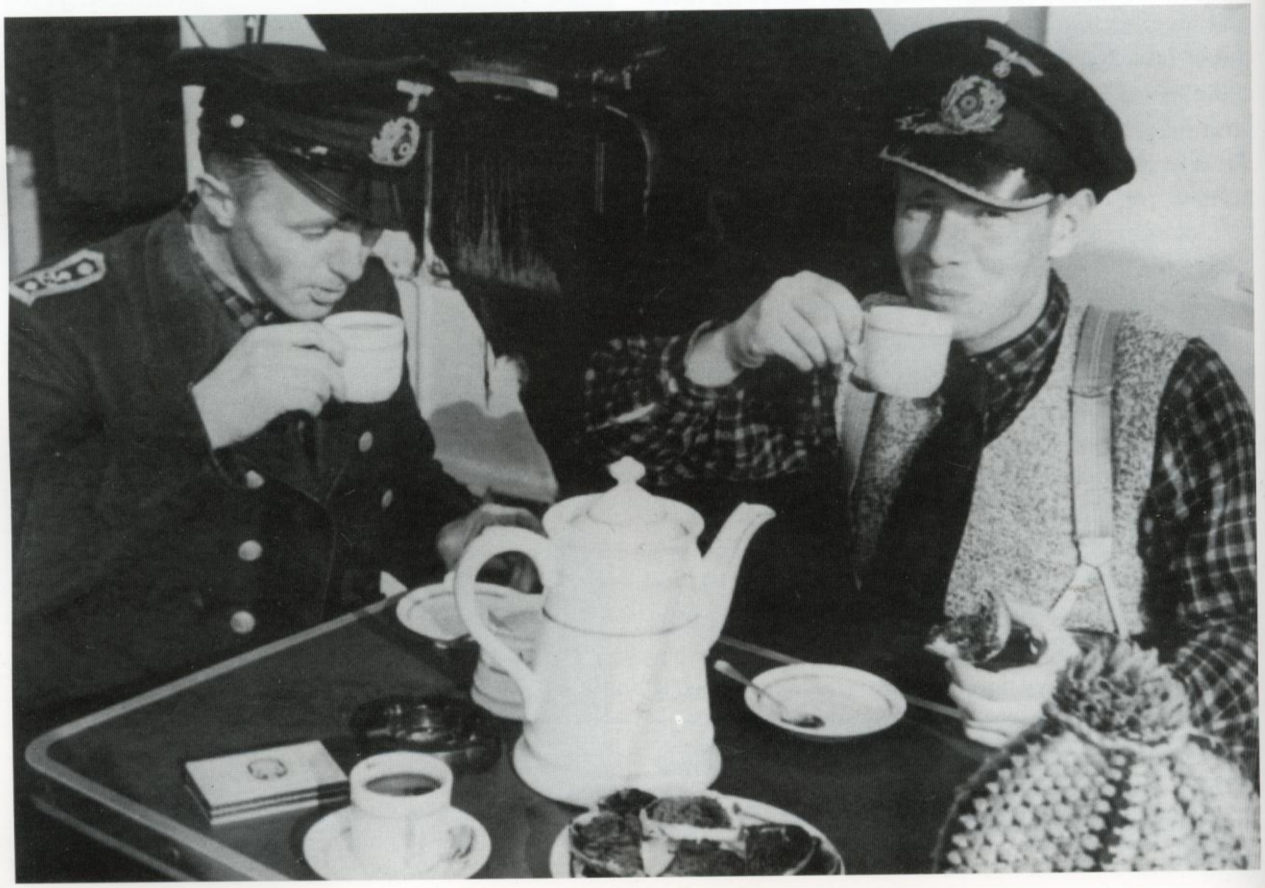
Engine Personnel

The jacket for so-called *Maschinenpersonal* was a single-breasted leather garment with a five-button fastening and a stand-up collar. It featured a single internal pocket on the left breast, with an external flap, and two internal skirt pockets, also with external flaps. At the bottom of each sleeve was a leather strap with button fastening for adjusting the fit of the cuff. Although the jacket was also made in black leather, those used by U-Boat crews were predominantly pale grey.

Deck Personnel

The leather jacket for deck personnel was a three-quarter-length double-breasted reefer-style jacket, usually fastened by four buttons but with a fifth pair which could be used to button the jacket up to the neck in foul weather. It had two internal skirt pockets

This photo clearly shows the degree to which non-regulation clothing was worn aboard ship. Note the chequered shirt and sleeveless pullover. It would seem that this officer is a recently promoted warrant officer. Note the shiny peak on his cap. It was not uncommon for a thin piece of brass to be cut to resemble the shape of the gilt wire embroidery on the regulation cap, and for it to be affixed to the peak of the cap until the correct headgear was available. (Jak P. Mallmann Showell)



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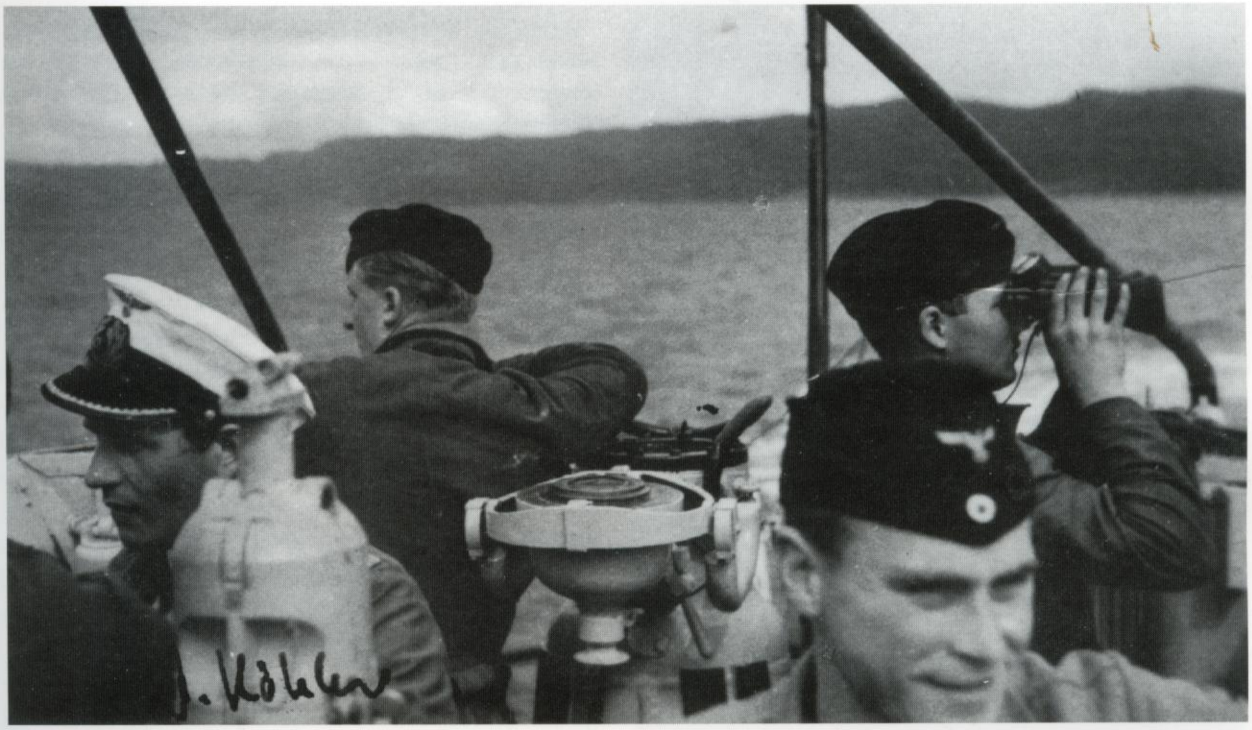


A view of the bridge of U-377 off the coast of Norway. The commander, Kapitänleutnant Otto Köhler, wears the white cover to his peaked cap. The three lower ranks all wear the Bordmütze. *The instrument to the left of centre is the housing for the attack periscope, while that to the right is the magnetic compass housing. (Jak P. Mallmann Showell)*

with external flaps and two slanted slash pockets at lower-chest level. The cuffs were plain. The jacket invariably had a horizontal seam at chest level. Like the jacket for engine personnel, it came in both black and grey leather, with grey predominant among U-Boat personnel. It was occasionally fitted with shoulder straps.

Both types of jacket were lined in warm dark grey blanket material.

The trousers for both jackets were cut from material identical to the jacket. They had straight legs and were made from several pieces of leather, so invariably had horizontal seams across the legs. They had button-fly fronts and side pockets and were fitted with buttons to take braces.

Foul-Weather Wear

Basic foul-weather gear consisted of a large, loose-fitting, knee-length double-breasted jacket in black rubberised material. It had two slanted slash pockets at lower-chest level. The interior lining of the sleeve was elasticated at the wrist, and the large collar could be turned up and fastened across the throat by a small strap to protect the side and rear of the wearer's head.

Waterproof black overtrousers in a similar material were also provided. They were fastened by a draw-string at the waist and had slash openings to allow access to the trousers beneath.

A waterproof balaclava-type cape was worn over the entire head and shoulders except the front of the face, and the ensemble was completed with a traditional sou'wester. This form of dress, though ungainly, was essential for standing watch on the bridge of a U-Boat in the teeth of an Atlantic storm.

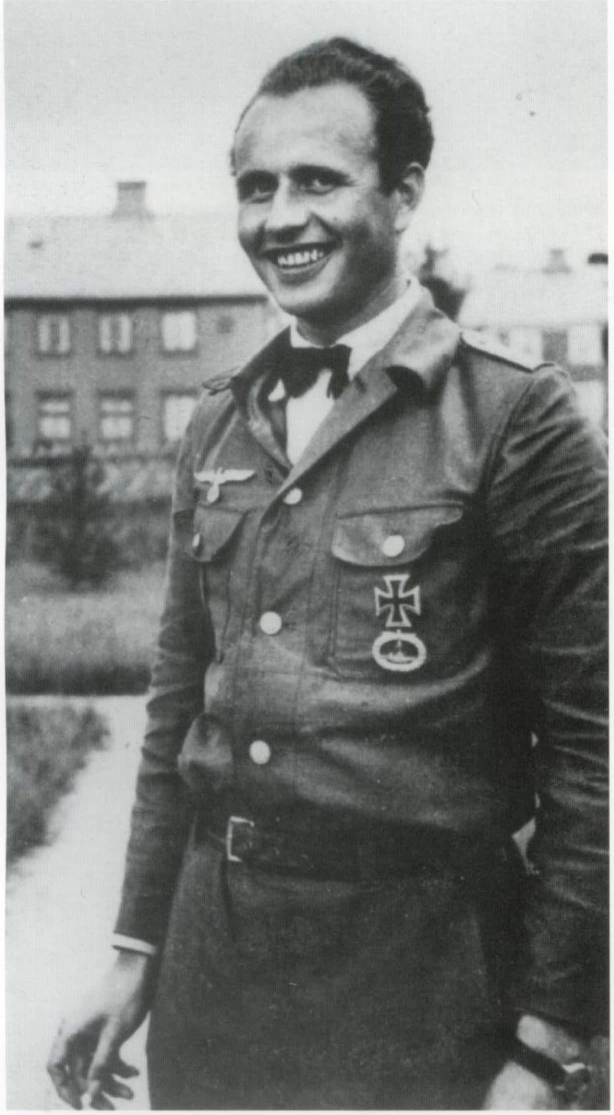
Headgear

The range of headgear worn by the German navy was quite extensive, but by no means would all of it have been used by the crews of the U-Boats. This section therefore details the types shown by photographs to have been worn on a reasonably regular basis.

The Peaked Cap

The peaked cap, or *Schirmmütze*, was the headgear most commonly worn by officers and warrant officers of the U-Boot Waffe of both the Kaiserliche Marine and the Kriegsmarine. The version worn in the Kaiser's navy consisted of a fine dark blue wool or doeskin top, of fairly small dimensions, fitted to a band covered with a woven black mohair capband and featuring a shiny black leather peak fitted with black leather edge binding. It had a black leather chinstrap held by two small gilt metal anchor motif buttons.

Insignia for officers consisted of a gilt wire hand-embroidered wreath of oakleaves surrounding a cockade in the national colours. At the top was a gilt wire-embroidered Hohenzollern crown. This insignia was stitched to the mohair band which was itself removable from the cap.



Kapitänleutnant Otto Köhler, first commander of U–377. He wears the German-made U-Boat battledress-style uniform with the gilt anchor buttons from the blue uniform attached. Shoulder straps have also been fitted, as has the gilt metal breast eagle from the white summer uniform. Note the Iron Cross First Class and U-Boat war badge on the left breast pocket. (Jak P. Mallmann Showell)

For warrant officers the wreath of oakleaves was removed, leaving the crown and the national cockade. The crown, however, featured ribbon streamers. Although white tops were worn on these caps, the use of the white cover had not begun to see widespread use as the unofficial symbol of the U-Boat commander.

The *Schirmmütze* worn by the Reichsmarine of the Weimar Republic was similar to its Imperial predecessor but with a larger crown, which was usually fitted with a wire stiffener, giving it a rigid appearance – the so-called '*Tellerform*' or saucer shape. The Imperial crown was deleted from the cap insignia, and the national cockade was replaced by a new one, oval in shape and bearing the black eagle emblem of the Reichsmarine.

Initially, when the Third Reich came into being, the *Schirmmütze* simply received a new set of insignia: the Weimar cockade was removed from the cap insignia and the national colours cockade was once again featured. Above this, on the front of the cap, was pinned a small gilt metal eagle and swastika device.

Around 1936 the cap was redesigned. It received a larger crown, usually worn without the wire stiffener, giving it a floppy appearance. For officers the peak was covered in dark blue cloth and bound in black leather. On the blue cloth covering the rank grouping was embroidered. For Leutnant to Kapitänleutnant it was a narrow band of gilt scallops, with the curves towards the cap; for Korvettenkapitän to Kapitän it was a wide band of gilt oakleaves; and for ranks from Kommodore upwards, a double-wide band of gilt oakleaves. Cap insignia were almost invariably embroidered, in gilt wire or yellow celluloid thread, though the gilt metal eagle and swastika continued to be worn on the white summer top. For warrant officers the peak was in shiny black leather, or *Vulkanfibre*, with leather edge binding.

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commanders to wear the *Schirmmütze* with the white summer top to identify them instantly as the boat's commander. This was unofficial, as the white cover was theoretically only to be worn during summer months. Caps were manufactured in a variety of styles – fixed blue top, fixed white top or interchangeable tops.

The *Matrosenmütze*

The traditional sailor's cap of the German navy had a fine dark blue wool top attached to a stiffened blue wool-covered band to which was fitted a tally ribbon bearing the name of the wearer's vessel or shore establishment. Caps worn by sailors of the Kaiserliche Marine had noticeably smaller tops than those of later years. The tally ribbon was made from black silk, and was of such a length that when attached to the cap, the excess formed two long tails.

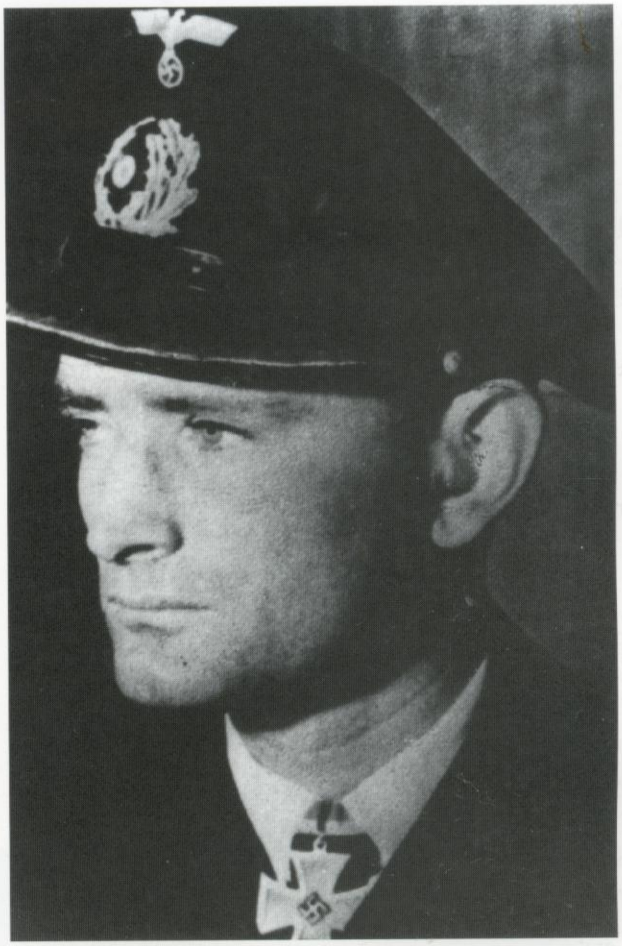
For Kaiserliche Marine caps the only insignia worn was the cockade in the national colours. For Reichsmarine caps it was the small oval plate in metal, bearing the black Reichsmarine eagle, and for Kriegsmarine caps it was a small gilt eagle and swastika, to the base of which was attached a small metal cockade in the national colours.

Tally ribbons for the Kaiserliche Marine had gilt wire block lettering for sea-going personnel (silver for administrative personnel). Reichsmarine tallies also had gilt woven block letters, until 1929, when Gothic letters were introduced. Gothic lettering was also used by the Kriegsmarine (and for some time post-World War Two by the West German Bundesmarine, before block letters were reintroduced. Reichsmarine and Kriegsmarine caps had a larger crown than the older Imperial caps.

The *Bordmütze*

The *Bordmütze* was a 'fore and aft'-style side cap which folded flat when not in use. It was cut from fine-quality navy blue wool, usually with a black or dark blue cotton or artificial silk lining. The flap to the cap was tapered, and was wider in the centre than at the front or rear of the cap. On the front was a yellow on dark blue eagle and swastika badge, over a cockade in the national colours.

Officers' caps featured gilt woven aluminium braid piping to the flap, and often had the insignia woven in metallic thread or hand-embroidered in bullion thread. As often as not, however, many U-Boat commanders seem to have elected to wear the standard lower ranks' pattern.



Kapitänleutnant Klaus Bargsten, commander of U–521. His victories included two warships – a destroyer and a sub-chaser. He was awarded the Knight's Cross on 30 April 1943. (Bargsten)

A white summer version was also produced, from white twill and with a white lining and the eagle and swastika insignia embroidered in blue thread.

Sailors undergoing their basic infantry training could wear a version of the Bordmütze in field grey cloth with the insignia woven in yellow on a dark green or field grey backing.

The Tropical Field Cap

A tropical field cap was manufactured for naval personnel. It was cut from khaki-brown denim-type twill material with false flaps and a long peak to shade the eyes from the sun. It had a metal grommet either side of the crown for ventilation. On the front was a machine-woven eagle and swastika in golden yellow on a tan base, over a machine-woven cockade in the national colours. The lining was usually green, but occasionally red, cotton. Officers' caps were manufactured with gilt aluminium braid piping to the crown.

The Tropical Sun Helmet

The navy also produced its own sun helmet, but it was cumbersome and large, which made it unsuitable for use by submariners. Nevertheless a few photos exist showing it being worn by U-Boat crewmen, but this would be the exception rather than the rule.

The Steel Helmet

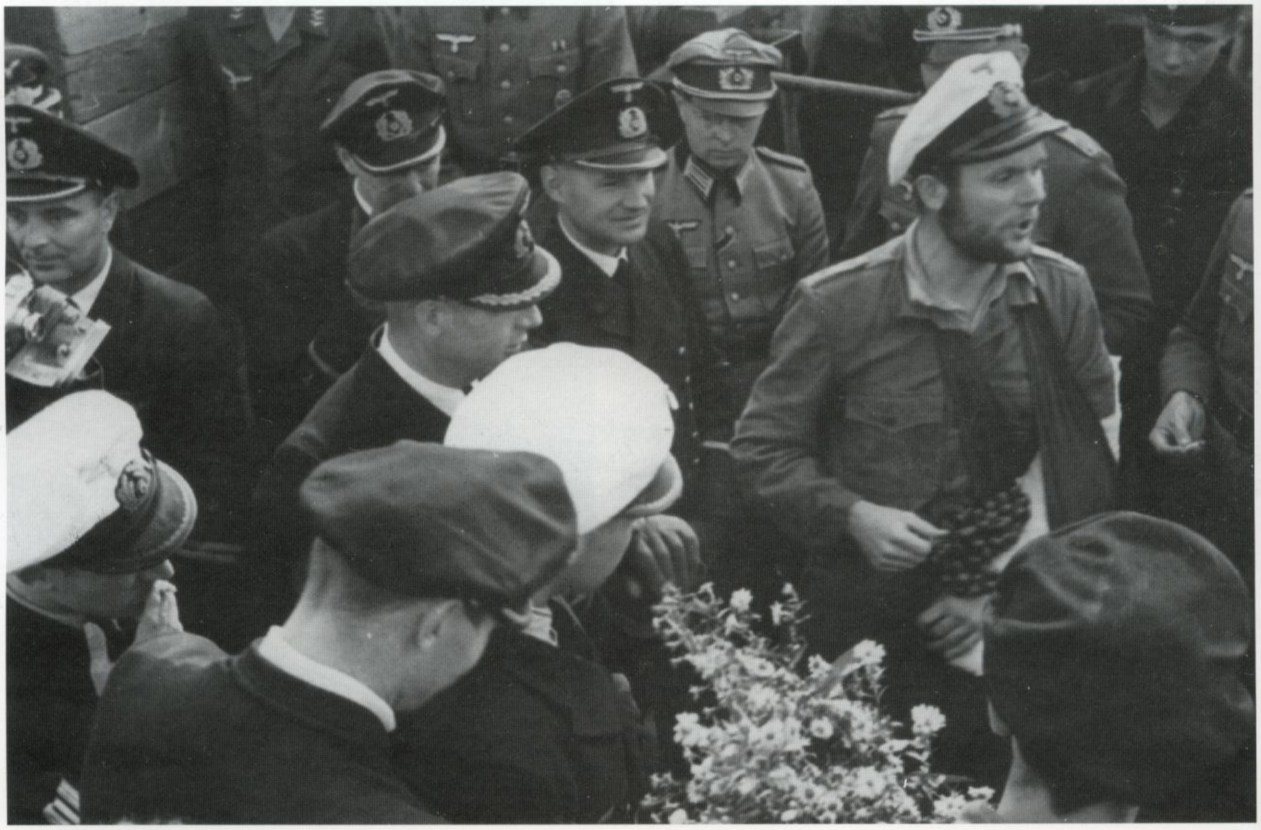
The steel helmet worn by naval personnel was identical to the army helmet: the Model 1916, Model 1918, Model 1935, Model 1940 and Model 1942 'raw edge' types were all worn. The only difference between the army and the navy patterns was in the insignia. On the left side of the helmet was a decal showing a black shield with a gilt eagle and swastika for the navy and a silver shield for the army. Reichsmarine helmets from the Weimer era often featured a shield with two crossed anchors.

The Woollen Cap

A knitted woollen cap was available on official issue for naval personnel, and was extremely popular among U-Boat crewmen. It was knitted from dark blue wool in a basic 'tube', with the open end rolled up and the closed end finished with a woollen pompom which gave the cap its nickname, *Pudelmütze*, or 'poodle cap'.

Belts, Buckles and Accoutrements

The standard navy-issue belt for lower ranks was black leather and 45 mm wide. On the left end was a metal catch and on the right side, on the inside face, was stitched a leather tongue, 35 mm wide and with



Köhler's successor as commander of U–377, Oberleutnant zur See Gerhard Kluth, being welcomed back to base after a war cruise. He wears the battledress-style blouse but without a breast eagle and with plain plastic buttons. (Jak P. Mallmann Showell)

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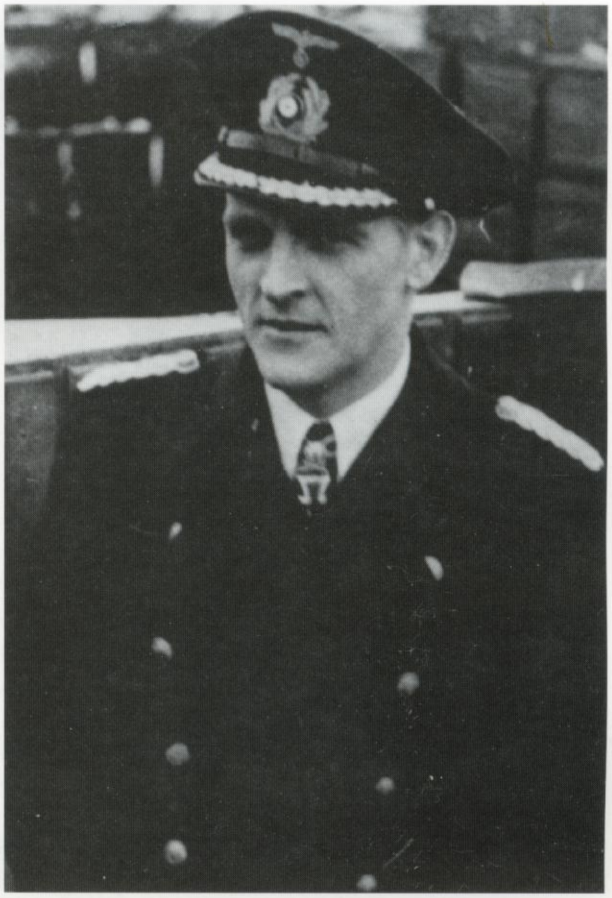
Korvettenkapitän Gerd Sühren was awarded the Knight's Cross as engineering officer on U-37. Subsequently he served on the staff of the C-in-C U-Boats. Sühren's brother Reinhard won the Knight's Cross as commander of U-564.



Fregattenkapitän Erich Topp, shown here wearing the officer's greatcoat, was one of only five U-Boat officers to win the Oakleaves and Swords to the Knight's Cross. He sank 35 ships, totalling over 192,000 tons.

seven pairs of holes to which the buckle could be attached. The reverse face of the buckle featured on one side a metal loop into which the belt catch was hooked, and on the other a bar with a double prong fitting for attachment to the tongue.

The face of the buckle bore a disc. Around the lower edge of the disc was a spray of oakleaves, and around the upper edge, the legend '*Gott Mit Uns*' (God with us). In the centre, for Imperial naval buckles, was the Hohenzollern crown, for Weimar period buckles the Reichsmarine eagle, and for Kriegsmarine buckles the eagle and swastika. Most early buckles were made of steel, but later examples were made from a number of light metal alloys including aluminium. Those for normal service wear were gilt-finished and those for active service were painted either dark blue or field grey. Belts for use in tropical areas were made from khaki-coloured webbing material.

For officers the normal service dress belt was made from brown or black leather 50–55 mm wide with an open rectangular buckle with double claw fitting and pebbled finish, in a matt silver colour. For parade or full-dress formal occasions, it was made from woven aluminium brocade and was 50 mm wide and backed with dark blue cloth. Two broken black lines were woven into the brocade laterally with the belt, around 15 mm from each edge. The buckle used was circular and comprised a wreath of oakleaves surrounding a ribbed field on which sat a fouled anchor (topped by a Hohenzollern crown on Imperial examples). A 22 mm-wide slide in the same style as the belt was sited either side of the buckle. The buckle was finished in gilt for line officers and silver for administrative officials. A smaller version of this buckle was also worn on a 35 mm-wide ribbed black fabric belt worn under the jacket or coat and from which was hung the dagger or sword: the hanging straps passed through a slit in the lining and appeared from under the pocket flap.

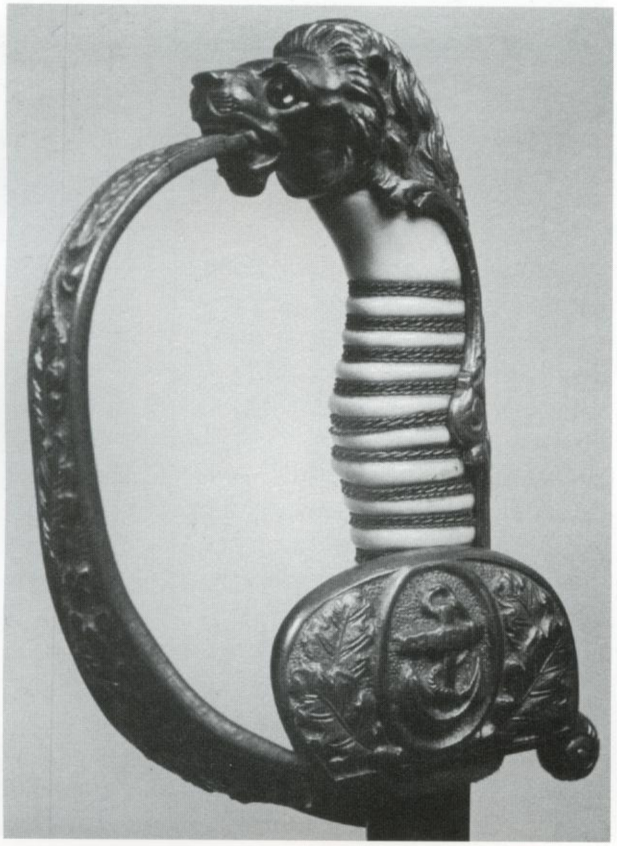
Accoutrements in the form of ammunition pouches, pistol holsters, leather 'Y' strap belt supports and so on used by naval personnel were identical to the standard army pattern.

WEAPONS

The Bayonet

The basic side-arm for lower ranks was the standard-issue bayonet, as used by the army. The metal fittings of the handle, the blade and the scabbard all had a chemically blued finish. The grip plates were in either wood or Bakelite plastic.

The bayonet was suspended from the standard service belt by means of a leather frog. U-Boat crewmen would only be likely to carry the bayonet on parade duty, for ceremonial occasions or when on guard duty when the submarine was docked.



The hilt of the standard German naval officer's sword. This example is of the pattern issued to Kriegsmarine officers, but is very similar to its Imperial predecessor. Red and green glass stones have been set into the eyes of the lion to represent port and starboard ships' navigation lights, a popular feature on naval swords. (F.J. Stephens)

The Sword

U-Boat officers and warrant officers wore the same sword as members of all other branches of the navy. It featured a lion's-head pommel in gilt brass with red and green eyes representing port and starboard on some pieces, a white ivory- or celluloid-covered wood grip with gilt wire wrap at 1 cm intervals, a gilt brass backstrap and knucklebow and front and rear shell guards, the former bearing a fouled anchor motif (and crown for Imperial pieces). The curved sabre-type blade could be found with a plain blade or with a variety of decorative etchings, including U-Boat motifs. The sword was carried in a black leather scabbard with gilt brass fittings and was suspended by two leather slings.

The Dagger

The naval dagger featured a long narrow stiletto-type blade with two deep fullers, in nickle-plated steel. It could be found with a large variety of different etchings, including U-Boat motifs. The handle could be genuine ivory, but was more commonly wood covered with white celluloid. It had a spiral grooved effect and into the groove was set gilt-twisted wire wrap. The crosspiece bore a rectangular panel in its centre on which was displayed a fouled anchor (crossed fouled anchors in Imperial versions) with rounded and grooved ball-type end pieces.

The pommel for Imperial daggers featured the Hohenzollern crown. Reichsmarine daggers had a ball-shaped pommel with a decorative flame effect, and Kriegsmarine daggers had an eagle and swastika.

The scabbard for the naval dagger was produced in a bewildering variety of forms: some had simple gilt brass scabbards with an engraved lightning bolt motif; others had hammered scabbards; and others still, a range of different oakleaf and anchor-type embellishments, often in high relief. All were sus-

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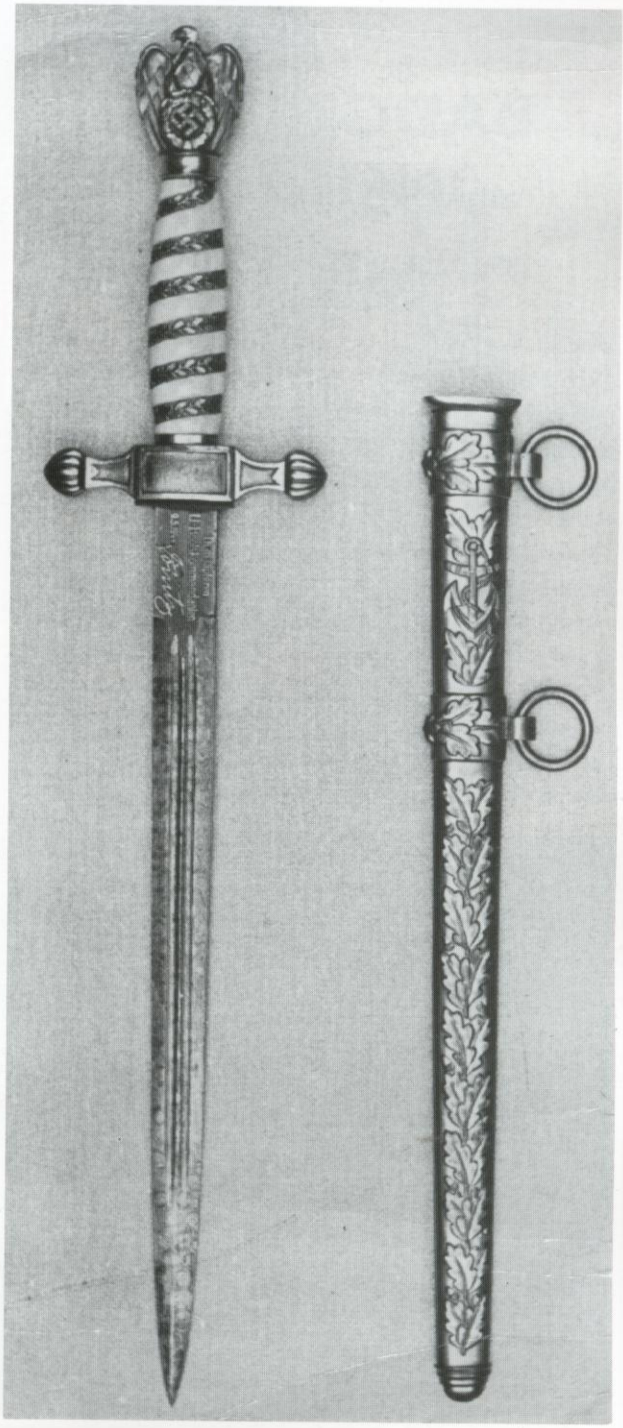
Other, non-standard blades could be specially ordered, including specimens in magnificent hand-forged Damascus steel. They were often purchased by the sailor's family to commemorate some important event such as his commissioning, promotion and so on. Daggers were rarely taken to sea, but were left safely at home or at the flotilla base with the owner's other personal effects.

Some years ago the U-Boat ace Adalbert Schnee related to the author that his own personalised dagger, presented to him by his proud parents, had been stolen from his Berlin flat when the Russians overran the city in 1945. The Russian solder who stole the piece must have then traded it to a British soldier, perhaps for something as insignificant as a pack of cigarettes or a watch, as it appeared for sale in the UK in the 1980s.

One edged weapon particularly associated with the U-Boat service was the 'honour dagger', or *Ehrendolch*, of the Kriegsmarine. Although the award of this dagger was not restricted to U-Boat personnel, it would seem that the majority of its recipients were in fact particularly successful U-Boat aces. The *Ehrendolch* was based on the standard naval dagger with several modifications. The swastika in the pommel was set with numerous small diamonds, and the gilt wire running in the spiral groove of the handle was replaced with decorative oakleaf work. The handle itself was in genuine ivory, and the centre panel of the crosspiece was devoid of any motif. The blade of the *Ehrendolch* was made from fine Damascus steel, and on the ricasso was an inscription in raised, gilded letters: '*In dankbarer Anerkennung*' (In grateful recognition) followed by the signature of Grossadmiral Raeder and the date of the award. The scabbard featured an extremely elaborate oakleaf pattern in high relief.

U-Boat recipients of the *Ehrendolch* included Kapitänleutnant Gunther Prien (U–47) in 1940, Kapitänleutnant Erich Topp (U–552) in 1942 and Kapitänleutnant Reinhard Suhren (U–564) in 1942. It is thought that Fregattenkapitän Albrecht Brandi (U–617) received the Raeder *Ehrendolch* in late 1942. After Grossadmiral Dönitz succeeded Raeder as



The beautiful Kriegsmarine Ehrendolch with its diamond-studded pommel, solid ivory handle with gilt oakleaf wrap and hand-forged Damascus steel blade. Just visible at the ricasso is the Dönitz signature referred to in the text, and the inscription Dem tapferen U-Bootskommandanten'. *(F.J. Stephens)*

Oberbefehlshaber der Kriegsmarine, he too awarded a small number of these daggers. At least one was to a U-Boat commander, since a unique example exists with the following inscription on the ricasso: '*Dem tapferen U-Bootskommandanten*' (To the brave U-Boat commander), followed by the signature of Dönitz and the date of the award. The recipient is not known.

BADGES AND INSIGNIA

The U-Boat War Badge (*U-Boot Kriegsabzeichen*)

The U-Boat war badge was introduced in February 1918 and was intended to recognise all U-Boat crew members who had participated in at least three operational war cruises, though this condition could be waived if the crew member was wounded in action. For the crews of the large, so-called 'U-Cruisers' – much bigger submarines, mounting large-calibre guns – only two war cruises were required to qualify for the badge, or 150 days on active service at sea.

The badge consisted of a horizontal oval wreath of laurel leaves bound with a ribbon and topped by the Imperial German Hohenzollern crown. In the centre of the badge was a representation of an early U-Boat, facing left across the badge. The badge was struck from brass and gilded. It could be either solid or hollow. The reverse carried a horizontal hinged pin fitting, and some examples have a maker's logo – usually '*Walter Schott*'. The badge was worn on the lower left breast of the jacket or shirt.

The U-Boat war badge continued to be manufactured and worn after the end of World War One, and the badge in its hollow struck form is still in production today.

On 13 October 1939, shortly after the outbreak of World War Two, the commander in chief of the navy, Grossadmiral Erich Raeder, reintroduced the U-Boat war badge. The qualifying conditions were similar to those for the earlier badge, but only two war cruises were required. The piece was also somewhat modernised: the basic oval wreath of laurel leaves remained, but the ribbon adornment was removed all but for a small crossed piece of ribbon at the base of the oval. The Imperial crown was deleted and replaced by an eagle and swastika emblem with outspread wings, and in the centre the old-style U-Boat was replaced by a representation of the Type VII U-Boat, the mainstay of the U-Boot Waffe in World War Two.

Early examples were beautifully struck in Tombak bronze, with a fine fire-gilded finish and usually with the spaces between the arms of the swastika cut out. Later issues were usually struck in zinc with a simple gilt wash which quickly wore off

Top U-Boat ace Wolfgang Lüth shares a joke with one of his crewmen. Lüth wears the U-Boat Badge with Diamonds and the Knight's Cross with Swords, Oakleaves and Diamonds. Lüth was tragically killed when he failed to answer the challenge of a sentry at the naval school at Flensburg-Mürwick. The sentry opened fire, fatally wounding the U-Boat ace. (Otto Giese)

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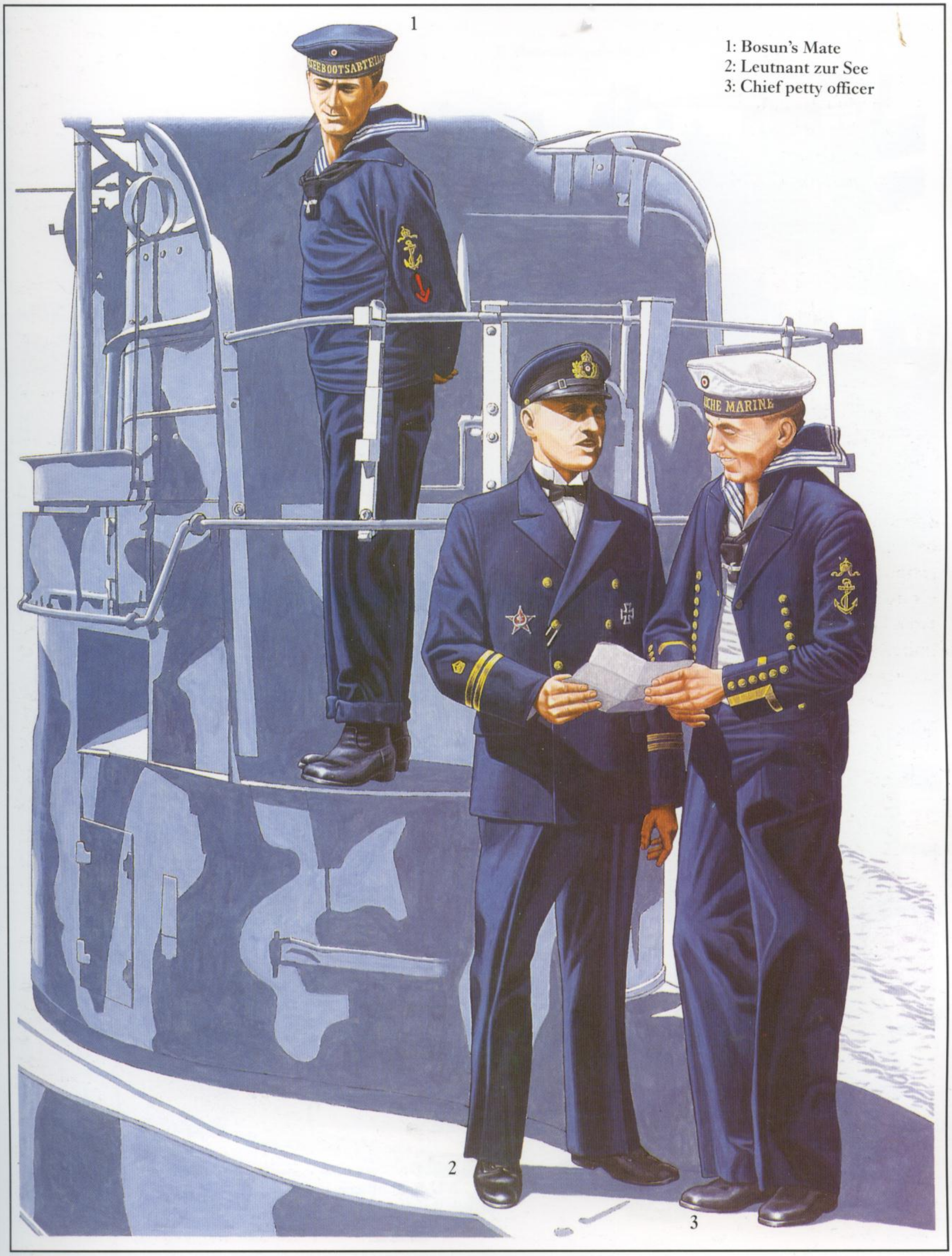

1: Bosun's Mate
2: Leutnant zur See
3: Chief petty officer

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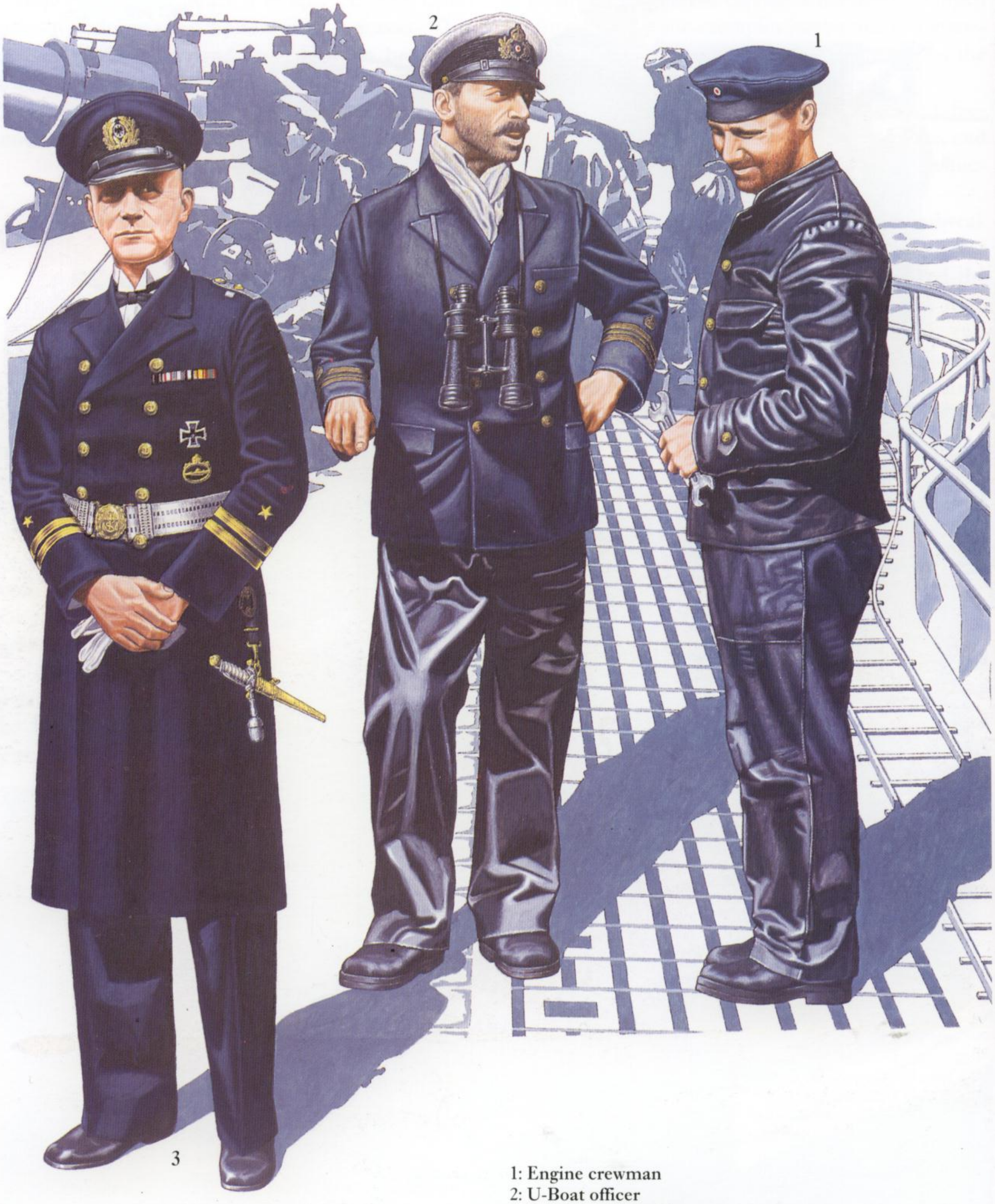
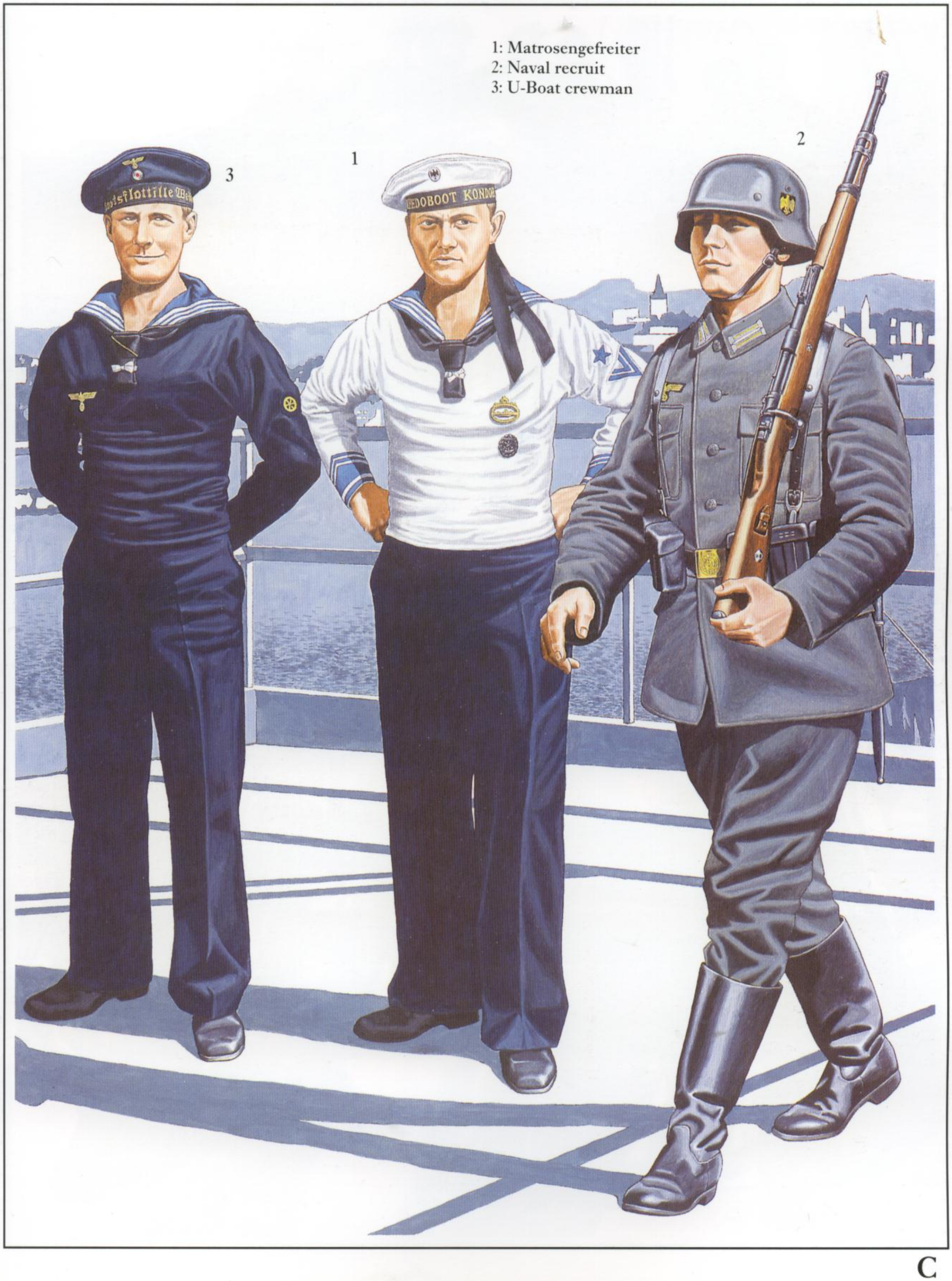


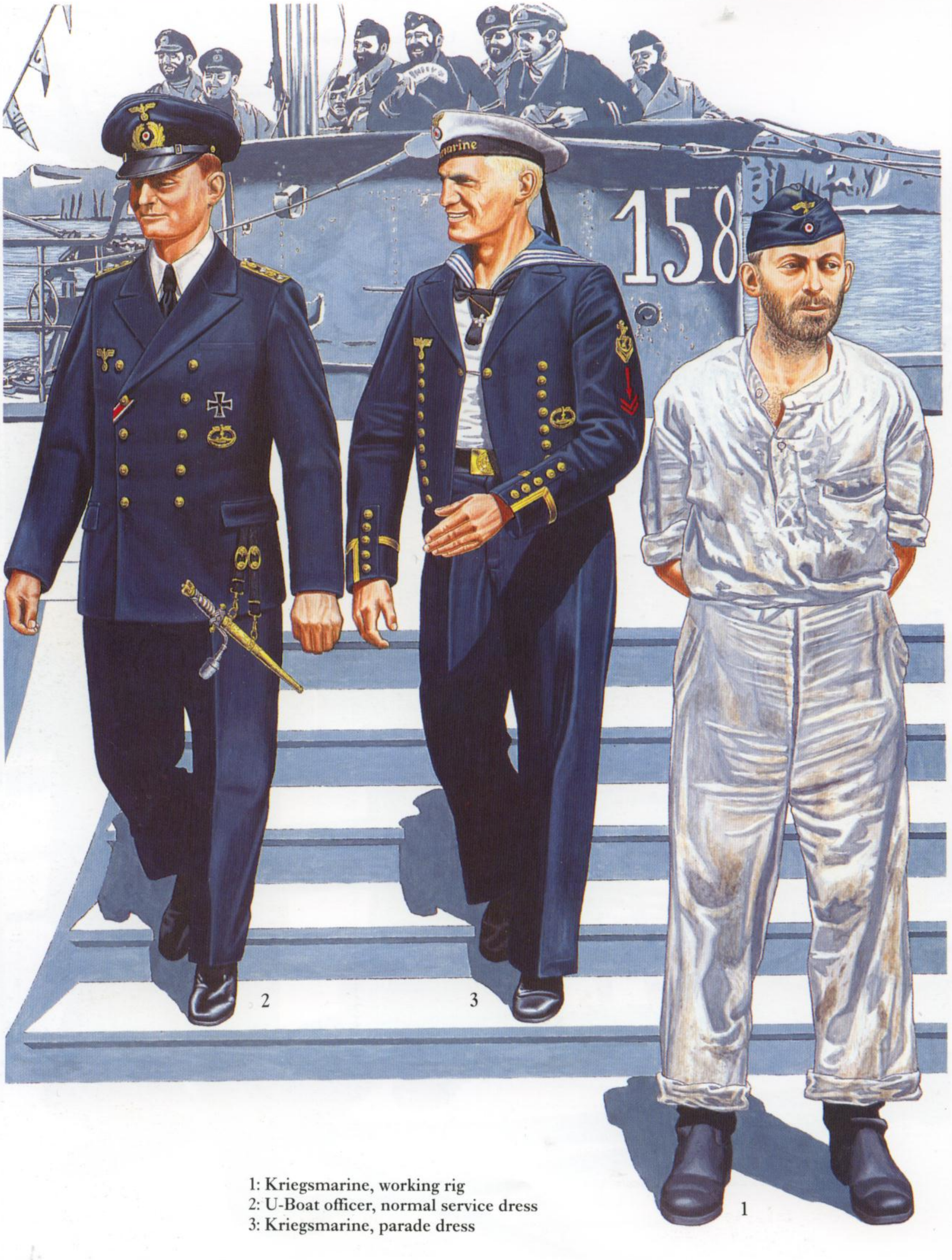
1: Engine crewman
2: U-Boat officer
3: Reichsmarine officer

B



1: Matrosengefreiter
2: Naval recruit
3: U-Boat crewman

C



1: Kriegsmarine, working rig
2: U-Boat officer, normal service dress
3: Kriegsmarine, parade dress

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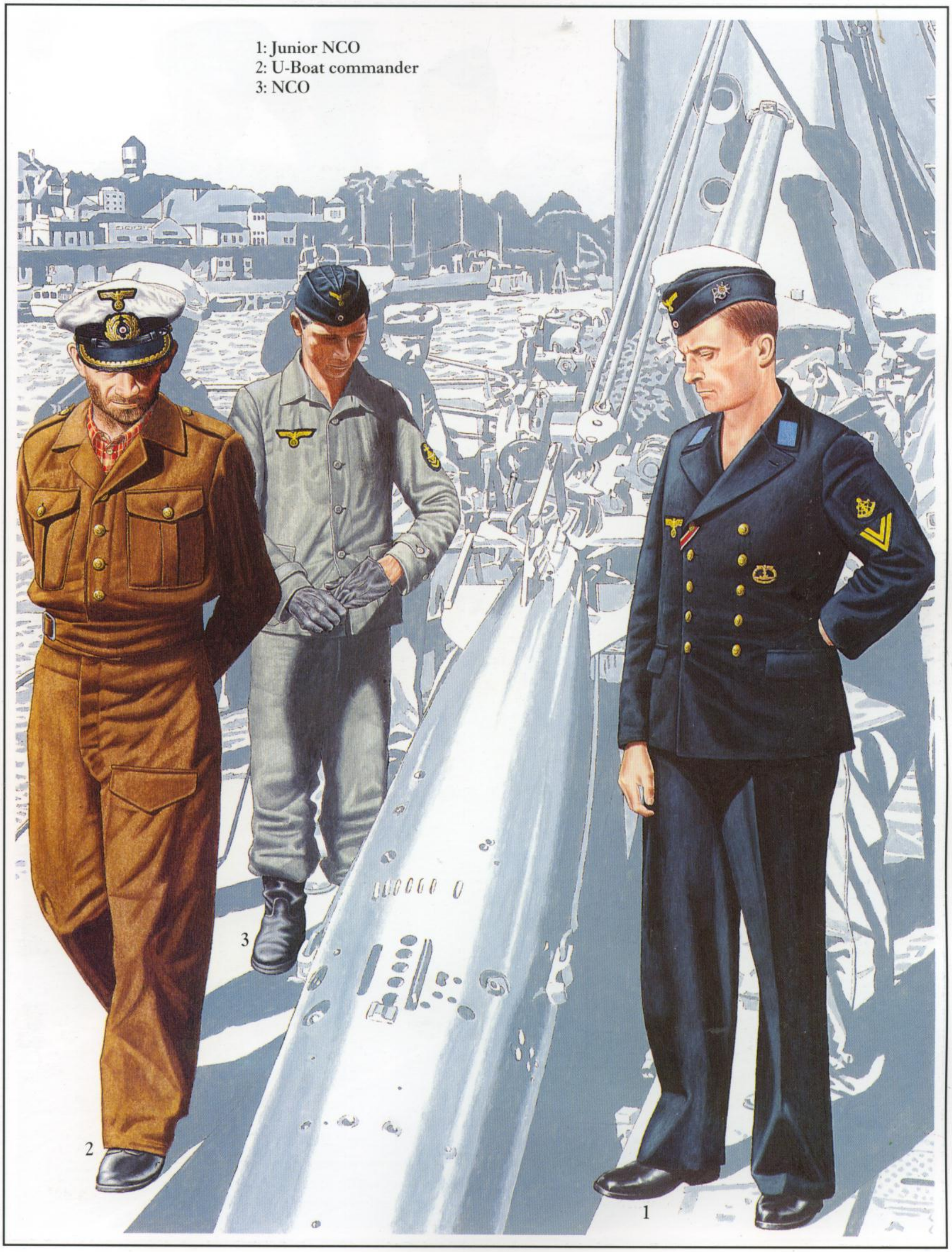

1: Junior NCO
2: U-Boat commander
3: NCO

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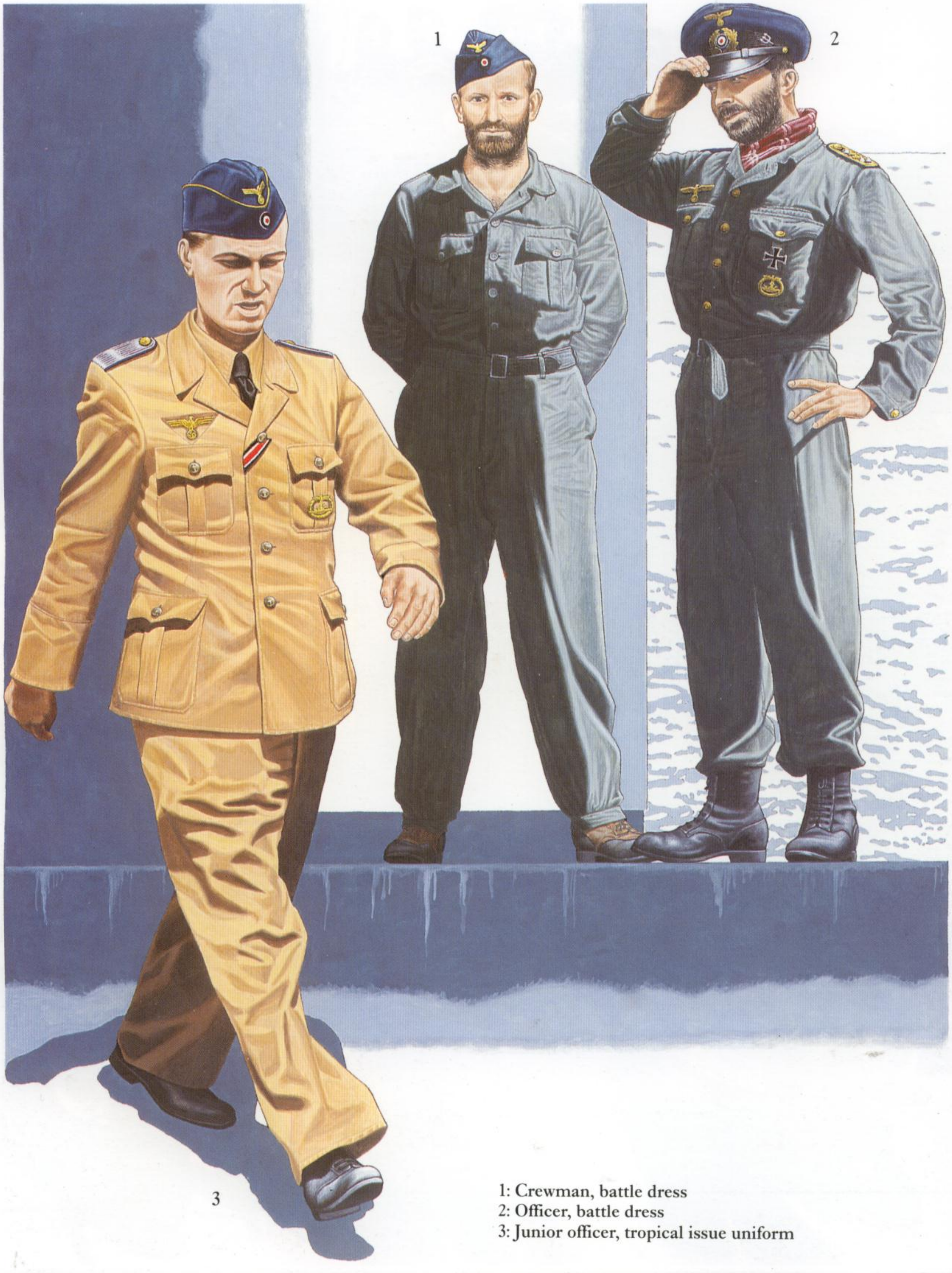

1: Crewman, battle dress
2: Officer, battle dress
3: Junior officer, tropical issue uniform

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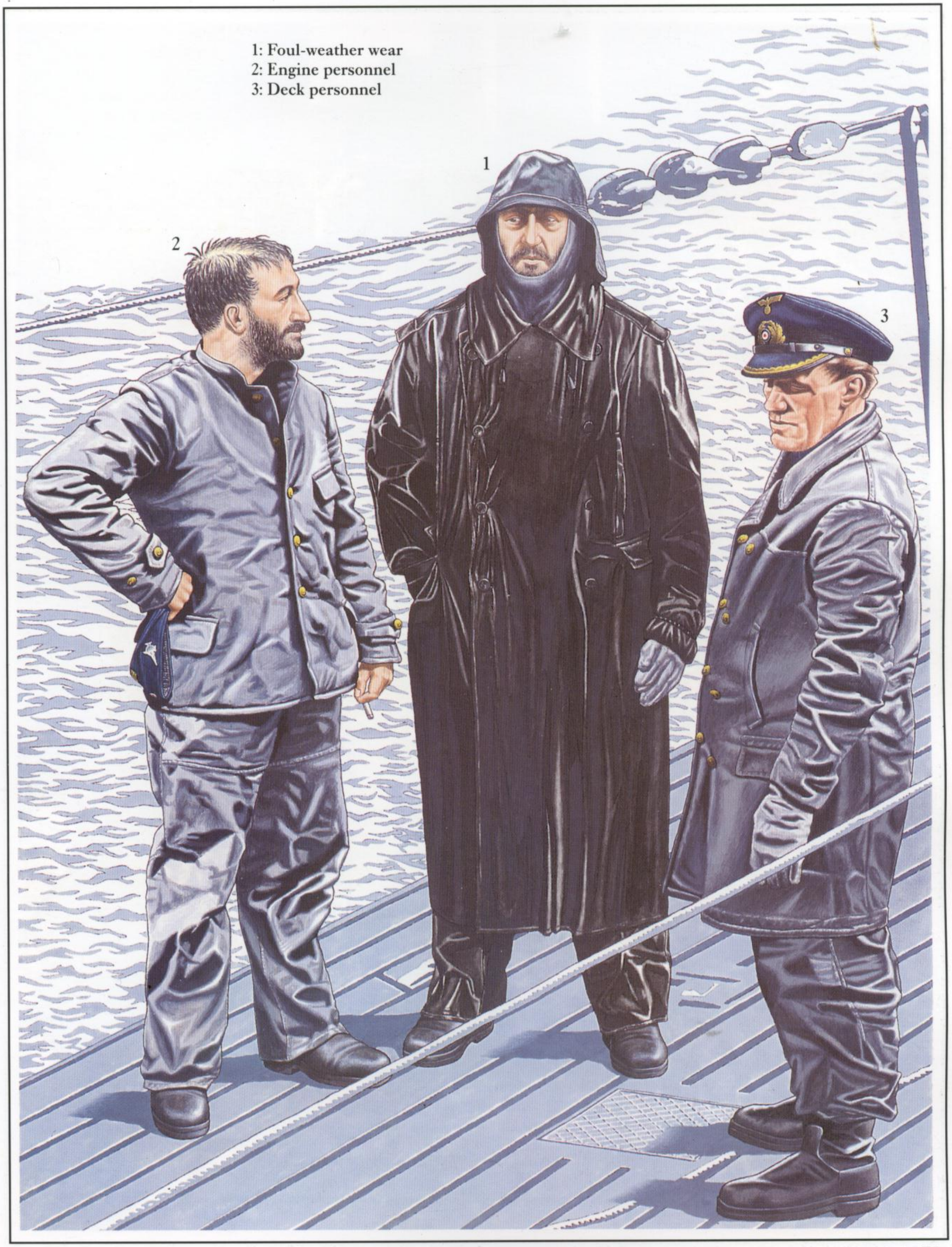
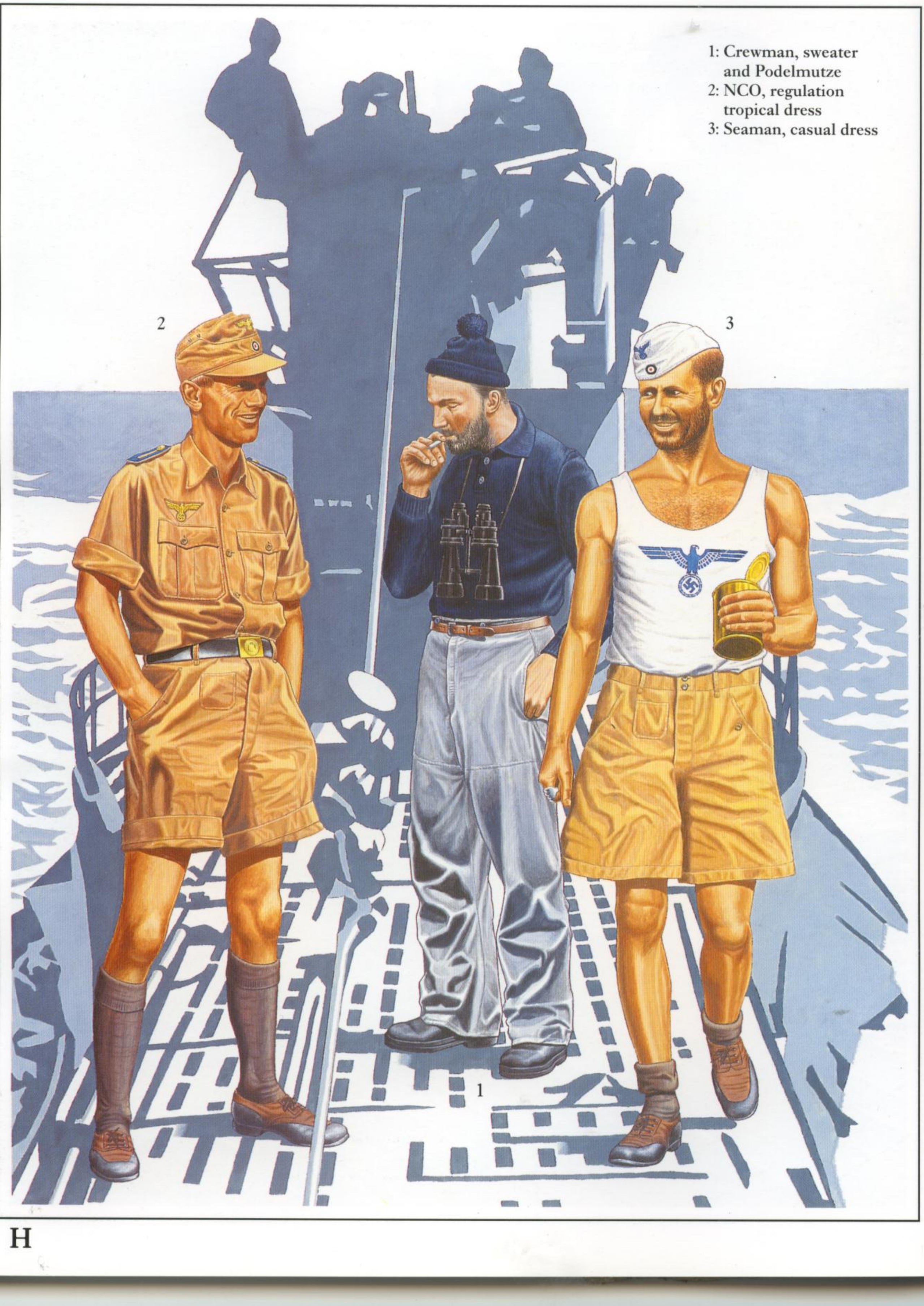

1: Foul-weather wear
2: Engine personnel
3: Deck personnel

G



1: Crewman, sweater and Podelmutze
2: NCO, regulation tropical dress
3: Seaman, casual dress

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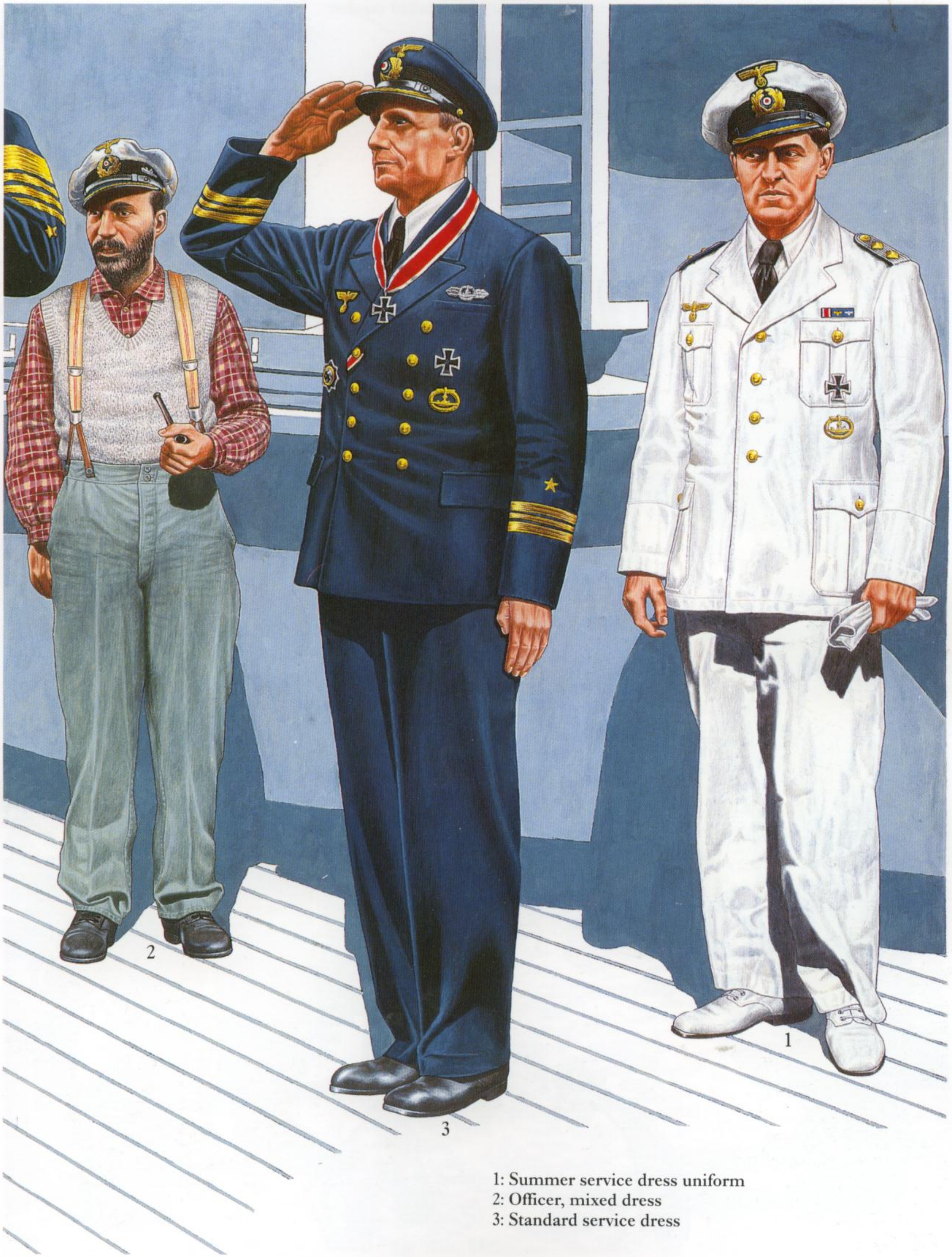

1: Summer service dress uniform
2: Officer, mixed dress
3: Standard service dress

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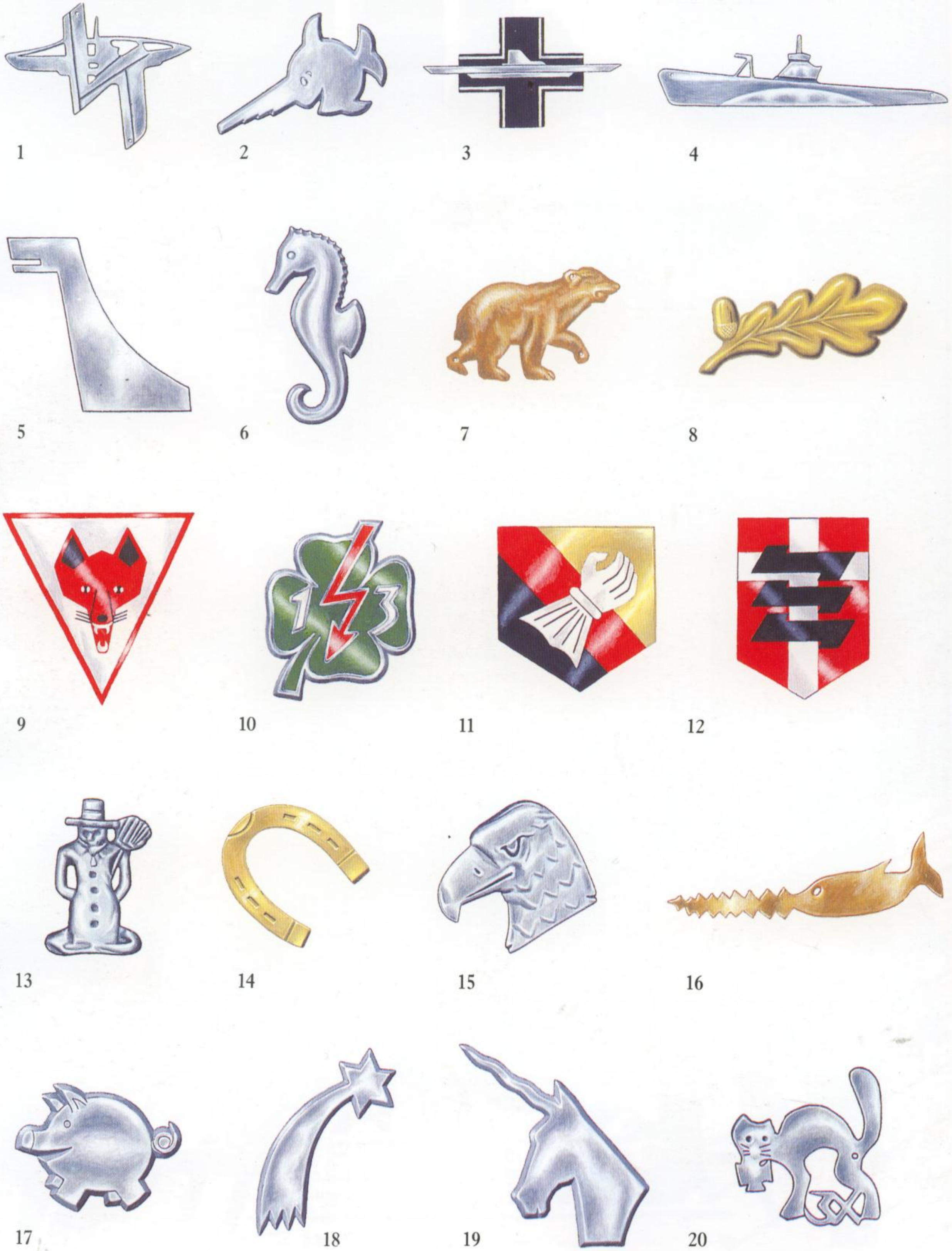
Flotilla and Individual Boat Insignia: see text commentary for detailed caption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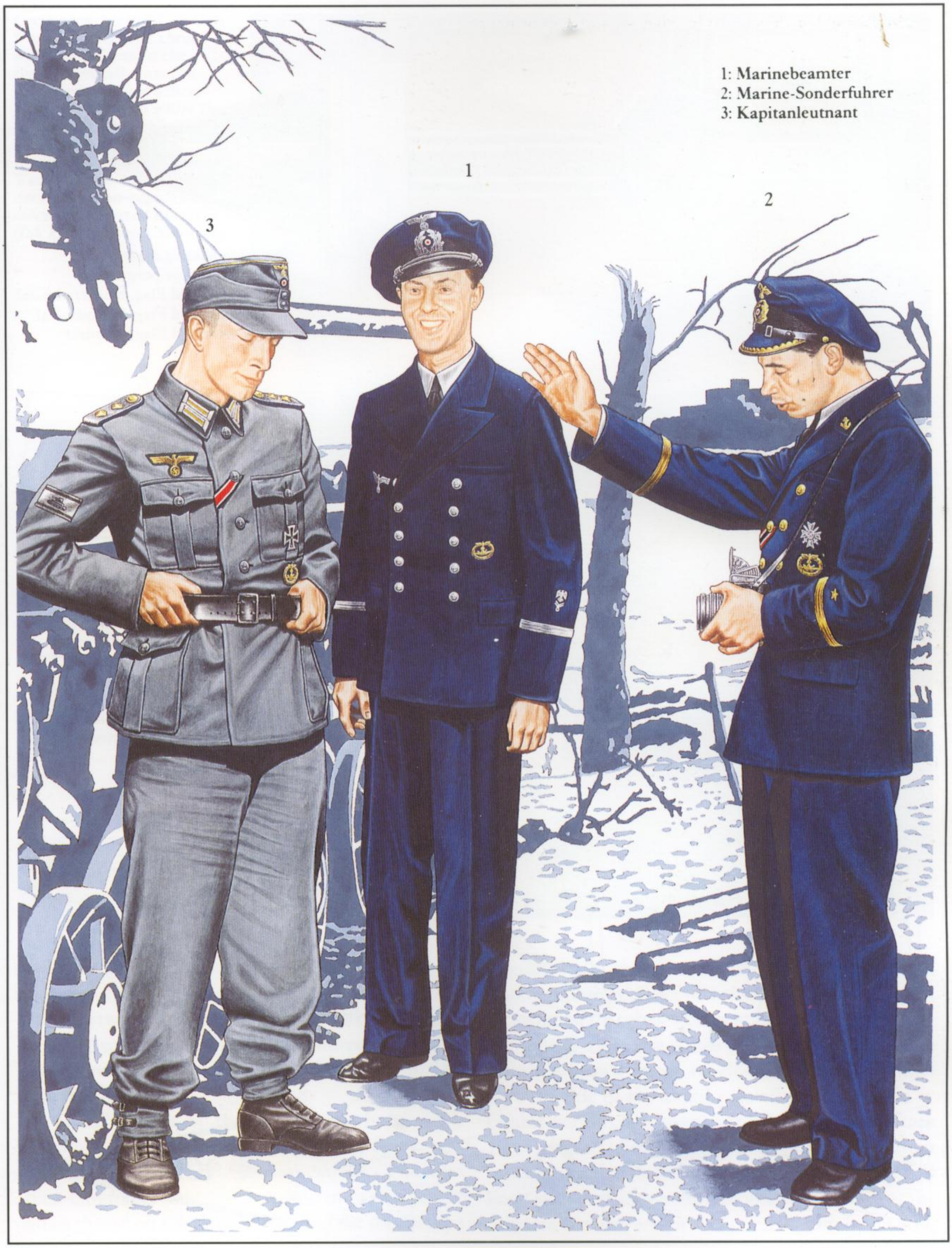

1: Marinebeamter
2: Marine-Sonderfuhrer
3: Kapitanleutnant

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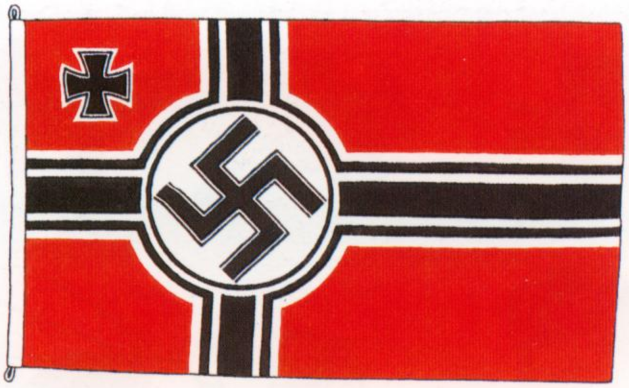

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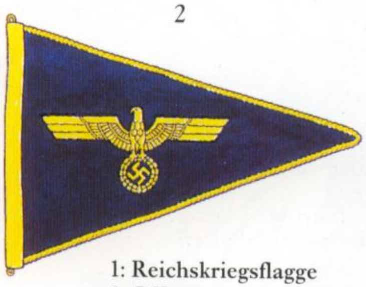

1: Reichskriegsflagge
2: Officers car pennant
3: Command Flag, Konteradmiral
4: Command Flag, Vizeadmiral
5: Command Flag, Admiral

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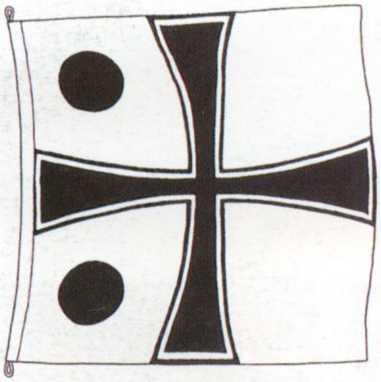

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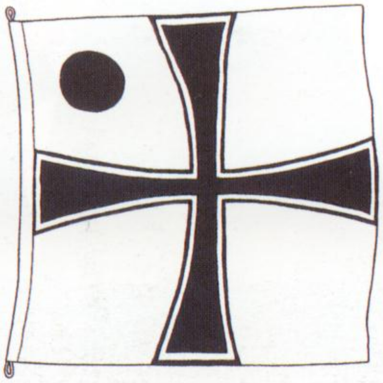

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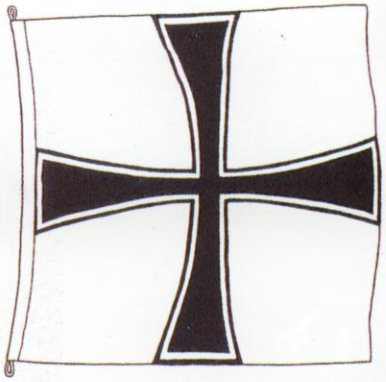

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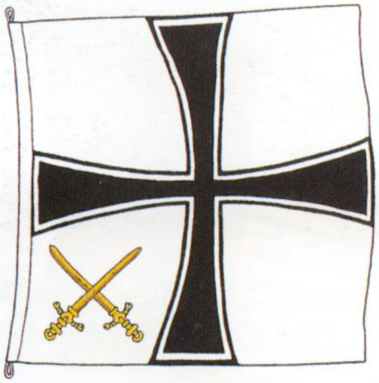

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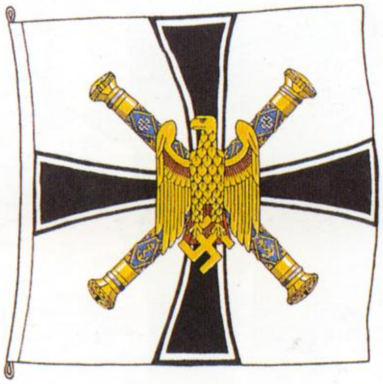
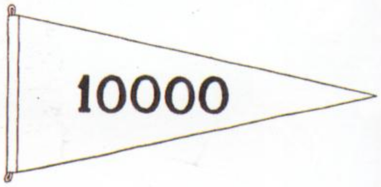


6: Command Flag, Generaladmiral
7: Command Flag, Grossadmiral
8: Victory pennants



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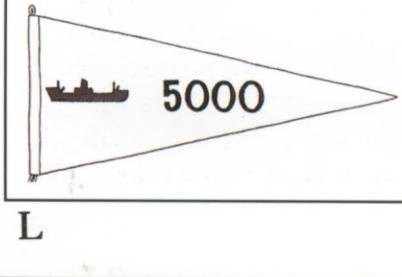

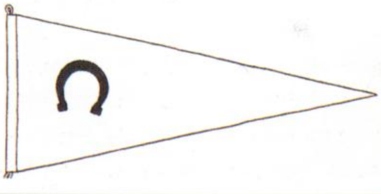

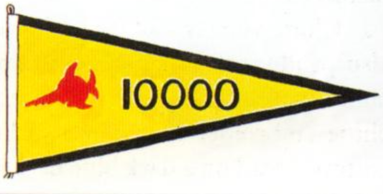

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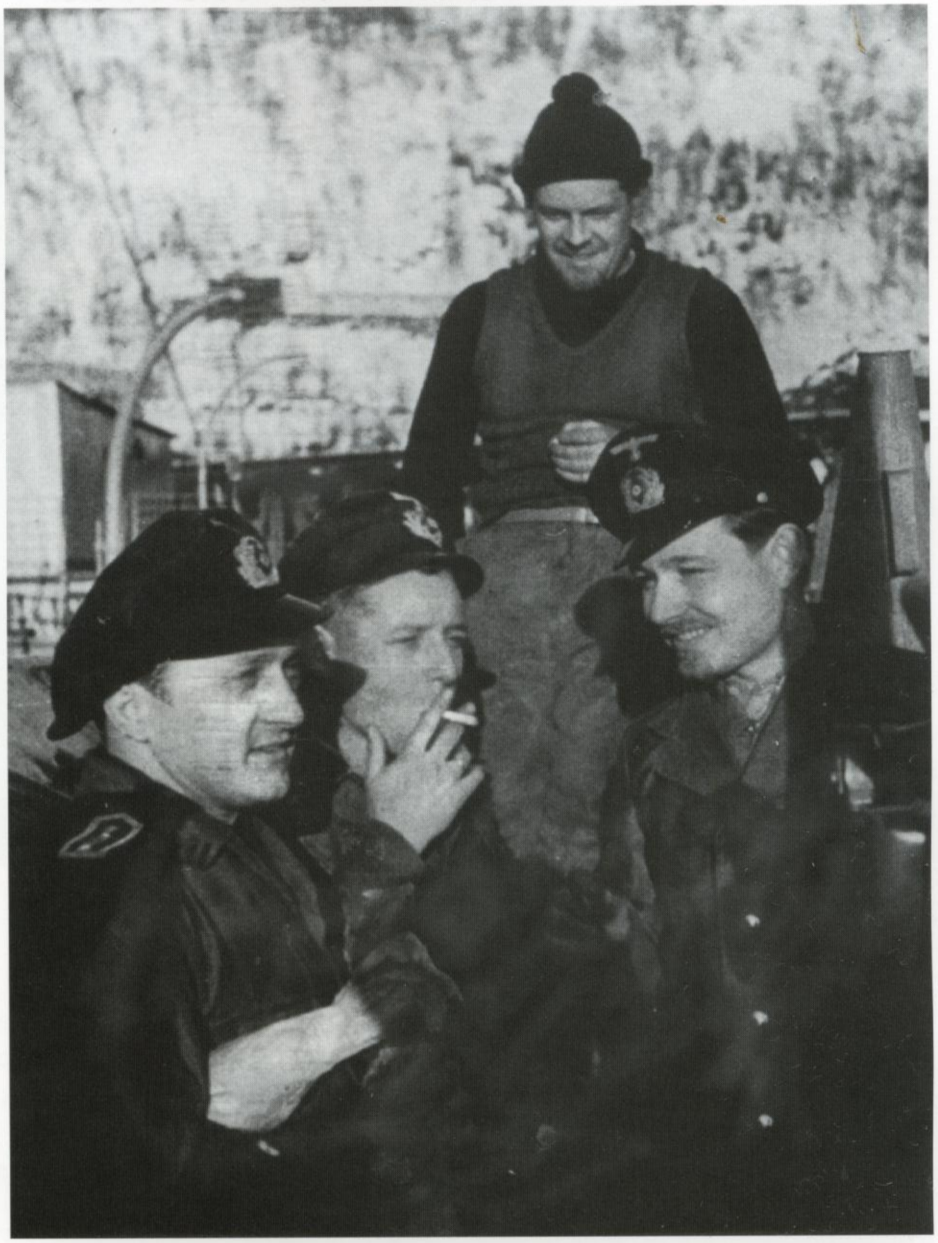


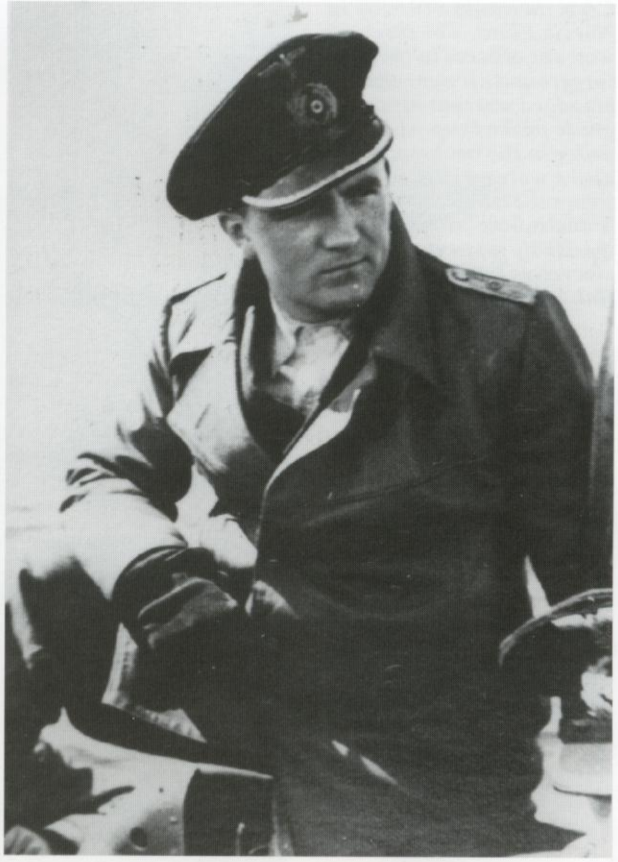
Crew members of U–377 in Narvik Fjord. The three warrant officers in the foreground all wear the standard warrant officer grade peaked cap while the sailor in the background, also a warrant officer, wears the so-called 'Pudelmütze' and a decidedly non-regulation sleeveless knitted pullover. (Jak P. Mallmann Showell)

leaving an unattractive matt grey finish. Most, but by no means all, of the later badges are found with the spaces between the arms of the swastika left solid. The reverse face of the badge had a hinged pin fitting – either vertical or horizontal – and usually a manufacturer's logo.

Cloth versions of the U-Boat war badge were also produced. These came in two basic types: machine-embroidered and machine-woven. The machine-embroidered badge is worked in golden yellow cotton thread on a dark blue base, and the woven type in gilt metallic thread on a dark blue silk woven base. Photographic evidence of either is very rare, so it can be assumed that they were not popular.

The U-Boat war badge was usually contained in a simple brown paper envelope, the face of which bore the title of the award printed in either Latin or Gothic script characters – '*U-Boot Kriegsabzeichen 1939*'. Some came in better-quality presentation cases, covered with dark blue leather-effect paper and lined with dark blue velveteen and silk. As well as the full-size version, which measured 48 mm by 39 mm,

Oberleutnant zur See Otto Westphalen. Though Westphalen did not have a particularly large tally of tonnage sunk, his achievements were nonetheless impressive, in that three of his victims were enemy destroyers. Westphalen was commander of U–968. (Westphalen)



The leather jacket for deck personnel, worn here by an Oberleutnant zur See. Note the typical horizontal seam at upper-chest level. (Jak P. Mallmann Showell)

a miniature on a stick pin was produced for wear on the lapel of a civilian jacket.

As with its Imperial predecessor, the badge was worn on the lower left breast. It was issued together with a large (A4 size) award document of fairly elaborate design, with a representation of the badge at the top. The award was noted in the owner's *Soldbuch* (paybook). An interesting variant of the award document was produced for issue to the next of kin where the award was made posthumously.

Rather crude examples of this badge, made on board the vessels, also exist. When a particularly popular comrade qualified for the badge, it was not uncommon for some skilled member of the crew to hand-cut a badge from scrap metal to be worn until such time as the official issue badge was received.

The U-Boat Front Clasp (*U-Boots Frontspange*)

On 15 May 1944 the then commander in chief of the navy, Grossadmiral Karl Dönitz, introduced the U-Boat front clasp in recognition of continued meritorious service of those who had already qualified for the U-Boat war badge. There were no strict criteria for the award: it could be given for personal bravery, the number of operational cruises completed, the degree of danger involved in a particular operation and so on. Once recommended, the decision as to whether to award the clasp lay with Grossadmiral Dönitz.

The centrepiece of the design consisted of a smaller version of the basic U-Boat war badge but with the wings of the eagle following the curvature of the wreath rather than being horizontal. At the base of the wreath was a pair of crossed swords, and from either side of the centre piece emerged a spray of

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oakleaves. The badge was struck in zinc with a bronze wash. It bore a horizontal hinged fluted pin fitting on the reverse, and was manufactured by only one firm, Schwerin of Berlin. The firm's logo was featured in raised letters on the reverse of the clasp. To the left of the central motif appeared '*ENTWURF PEEKHAUS*' and to the right, '*AUSF SCHWERIN BERLIN 68*'. The clasp measured 76 mm by 24 mm and was worn on the upper left breast, above the breast pocket or in the approximate position on the pullover shirt.

On 24 November 1944 a silver grade was introduced. It was identical to the bronze piece but for the colour. Despite the fact that gold grades have occasionally appeared on the collector market, no such grade was ever introduced, as was confirmed by Grossadmiral Dönitz shortly before his death. It is possible that the Schwerin firm produced a few test shots of a gold grade, anticipating its introduction, but this remains pure speculation.

The *U-Boots Frontspange* was also accompanied by an award document, but this was of smaller size (usually A5) and less elaborate than that for the basic U-Boat war badge; indeed, some were merely typewritten on blank paper. The award of the clasp was recorded in the recipient's paybook.

The U-Boat Badge with Diamonds (*U-Boot Abzeichen mit Brillanten*)

This piece was not an official award. Significantly, the title is 'U-Boat badge with diamonds', not 'U-Boat war badge with diamonds'. It was in fact a personal gift from the commander in chief of the navy to his most successful U-Boat commanders – those who had been decorated with the Knight's Cross of the Iron Cross with Oakleaves. Only 29 such awards were made.

There was no special award document: each piece came with a simple letter on the headed notepaper of the C-in-C navy, congratulating the recipient on his success and advising him of the award.

The badge consisted of the standard award piece

Fregattenkapitän Heinrich Lehmann-Willenbrock, holder of the Oakleaves to the Knight's Cross with the flotilla mascot of 11 U-Flotille. Note the flotilla badge of a sawfish on the goat's woollen coat. Lehmann-Willenbrock sank 25 ships, totalling over 183,000 tons. His U-Boat, the U–96, was the vessel around which the hugely successful film* Das Boot *was based. (Jak P. Mallmann Showell)

but struck in solid silver and gold-plated. A larger swastika was affixed over the normal swastika on the badge and in this new swastika were set nine small diamonds, one in the centre and two in each of the swastika's arms. Grossadmiral Dönitz himself wore a special version of this badge, presented to him by Grossadmiral Raeder. It was struck in solid gold and not only the swastika but also the laurel wreath was set with small diamonds. The badge was taken from Dönitz on his arrest after the war, and had its swastika crudely broken off.

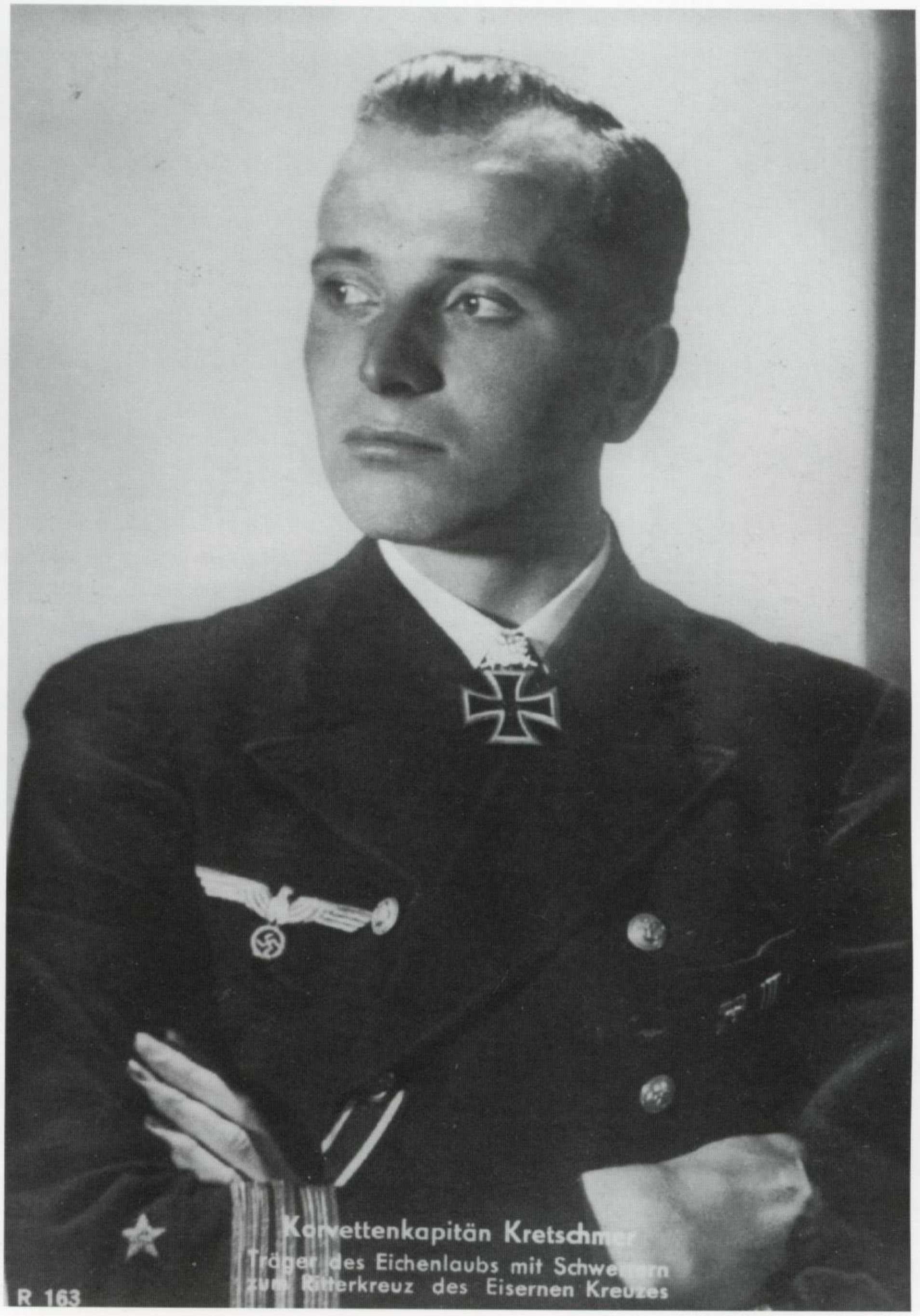
Recipients of the U-Boat Badge with Diamonds
Kapitänleutnant Gunther Prien, U–47
October 1940
Kapitänleutnant Otto Kretschmer, U–99
November 1940
Kapitänleutnant Joachim Schepke, U–100
December 1940
Kapitänleutnant Heinrich Liebe, U–38
June 1941
Oberleutnant zur See Engelbert Endrass, U–46
June 1941
Kapitänleutnant Herbert Schultze, U–48
July 1941
Kapitänleutnant Heinrich Lehmann-Willenbrock, U–96
December 1941
Oberleutnant zur See Reinhard Sühren, U–564
December 1941
Kapitänleutnant Erich Topp, U–552
April 1942
Kapitänleutnant Reinhard Hardegen, U–123
April 1942
Kapitänleutnant Rolf Mutzelburg, U–203
July 1942
Kapitänleutnant Adalbert Schnee, U–201
July 1942
Korvettenkapitän Claus Scholtz, U–108
September 1942
Kapitänleutnant Heinrich Bleichrodt, U–109
September 1942
Kapitänleutnant Wolfgang Lüth, U–43
November 1942
Korvettenkapitän Karl-Friedrich Merten, U–68
November 1942
Kapitänleutnant Friedrich Guggenberger, U–81
January 1943
Kapitänleutnant Johann Mohr, U–124
January 1943
Kapitänleutnant Georg Lassen, U–160
March 1943
Kapitänleutnant Albrecht Brandi, U–617
April 1943
Kapitänleutnant Otto von Bulow, U–404
April 1943
Kapitänleutnant Robert Gysae, U–177
May 1943
Kapitänleutnant Carl Emmermann, U–172
July 1943
Kapitänleutnant Werner Henke, U–515
July 1943
Kapitän zur See Werner Hartmann, U–198
November 1944
Kapitänleutnant Rolf Thomsen, U–1202
April 1945
Kapitänleutnant Hans Gunther Lange, U–711
April 1945

It is a significant indicator of the waning fortunes of the U-Boot Waffe that from July 1943 to April 1945 only one U-Boat officer qualified for the U-Boat badge with diamonds, and by the time he qualified for the award, he was serving as a flotilla commander rather than a commander of an individual U-Boat.

In 1957 the law prohibiting the wearing of Third Reich decorations was amended to allow many to be worn, provided the offending swastika emblem was removed. The new design for the U-Boat war badge and U-Boat Front Clasp, however, lost both the eagle and the swastika.

One final version of the U-Boat badge deserves mention. When Dönitz was promoted to the rank of Grossadmiral, his status as commander in chief of the U-Boats was recognised in the design of the Grand Admiral's Baton, which was crafted for him. On the upper end piece is a beautifully sculpted representation of the U-Boat badge in solid gold and platinum. This exquisite piece of craftsmanship now rests in the museum of the Shropshire Light Infantry in Shrewsbury.

The most significant military decoration awarded to individual U-Boat commanders was the Knight's Cross of the Iron Cross. This award was given not just for acts of supreme personal gallantry but also for distinguished military service. In the case of many U-Boat commanders it was awarded after they had reached a significant score of enemy shipping sunk, or had achieved a single spectacular sinking of a major enemy warship, such as the sinking of the *Royal Oak* by Prien or the sinking of the *Barham* by Hans Diedrich von Tiesenhausen. A total of 145 U-Boat men were awarded the Knight's Cross, with a further 29 winning the Oakleaves (including Grossadmiral Dönitz). Of some 160 winners of the Swords and Oakleaves to the Knight's Cross, five were U-Boat commanders. Two U-Boat commanders, Wolfgang Lüth and Albrecht Brandi, won the highest award of all, the Knight's Cross of the Iron Cross with Swords, Oakleaves and Diamonds.


Korvettenkapitän Kretschmer
Träger des Eichenlaubs mit Schwertern
zum Ritterkreuz des Eisernen Kreuzes
R 163

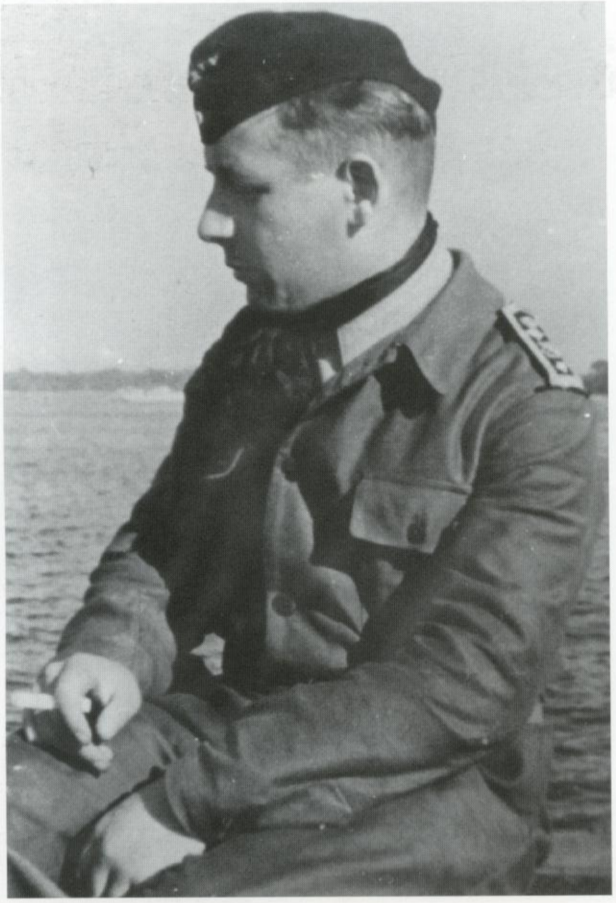
One of Germany's best known U-Boat aces is undoubtedly Otto Kretschmer. The sleeve rings show his rank as Kapitänleutnant, and the photo also shows Kretschmer wearing the Swords and Oakleaves to the Knight's Cross. In fact when Kretschmer's boat, the U–99, was sunk, and Kretschmer was taken into captivity, he held the rank of Kapitänleutnant and was a holder of the Oakleaves. The subsequent promotion and award of the Swords took place after his capture, indicating that this wartime propaganda photograph has been retouched.

THE PLATES

A1: Bosun's mate

This sailor of the Kaiserliche Marine wears normal landing rig, comprising black leather sea-boots and long blue trousers which are rolled up slightly at the bottoms. His pullover shirt is of a style which has remained virtually unchanged to this day. In navy blue woollen fabric, it features the traditional cornflower blue '*Kieler Kragen*' collar and black silk neckerchief. Headgear is the *Matrosenmütze* with black silk tally ribbon bearing the legend '*Unterseeboots-Abteilung*' in gilt wire lettering.

As a petty officer or bosun's mate (*Bootsmannsmaat*) he wears rank insignia in the form of a gold-coloured thread-embroidered fouled anchor topped by an Imperial crown. Below this is his specialist insignia as a torpedo control foreman, Grade III – a red embroidered torpedo pointing upwards, over a red chevron.



A U-Boat warrant officer wears the grey-green battledress-type blouse with Bordmütze. *The shoulder straps indicate the rank of* Obersteuermann. *Note the civilian scarf. (Jak P. Mallmann Showell)*

A2: Leutnant zur See

This Leutnant zur See wears the officer's reefer jacket together with plain dark blue trousers and black leather lace-up shoes. His rank is denoted by the two rings of wide gilt braid on each sleeve. Above the sleeve rings sits the Hohenzollern crown. In the second buttonhole of his jacket is the ribbon of the Iron Cross Second Class, and on the left breast is the so-called '*Eisernes Halbmond*'. Although German-made, this was a Turkish decoration awarded to Germans who had supported the Turks in the campaign in the Dardanelles. A white shirt and black bow tie is worn, with the officer's *Schirmmütze*.

A3: Chief petty officer

This chief petty officer wears the parade jacket, or *Affenjacke*, over his white pullover shirt, with the collar outside the jacket, as prescribed by regulation. The trousers are those from the normal blue service uniform (but not rolled up), as are the boots.

The petty officer's status is indicated by the 2 cm-wide gilt braid on the cuffs of his jacket, and his specific rank is shown by his sleeve badge, a large gilt metal fouled anchor with the Hohenzollern crown above and a single gilt chevron below. The *Matrosenmütze* he wears has the white top as used in the summer months and bears the cap tally ribbon '*Kaiserliche Marine*'.

B1: Engine crewman

Leather uniforms were very popular with U-Boat crews in both wars. This sailor wears the leather uniform for engine personnel – a single-breasted jacket with stand-up collar. World War Two leather jackets worn by U-Boat crews were predominantly grey, but black was equally common in World War One. Trousers to match the jacket are worn, with the legs over, rather than tucked into, the sea-boots.

Although the *Matrosenmütze* with its long tails was hardly suitable for wearing in submarines, it was nevertheless standard wear for personnel not entitled to wear the *Schirmmütze*. It seems that some seamen either removed the ribbon, as here, or chopped the

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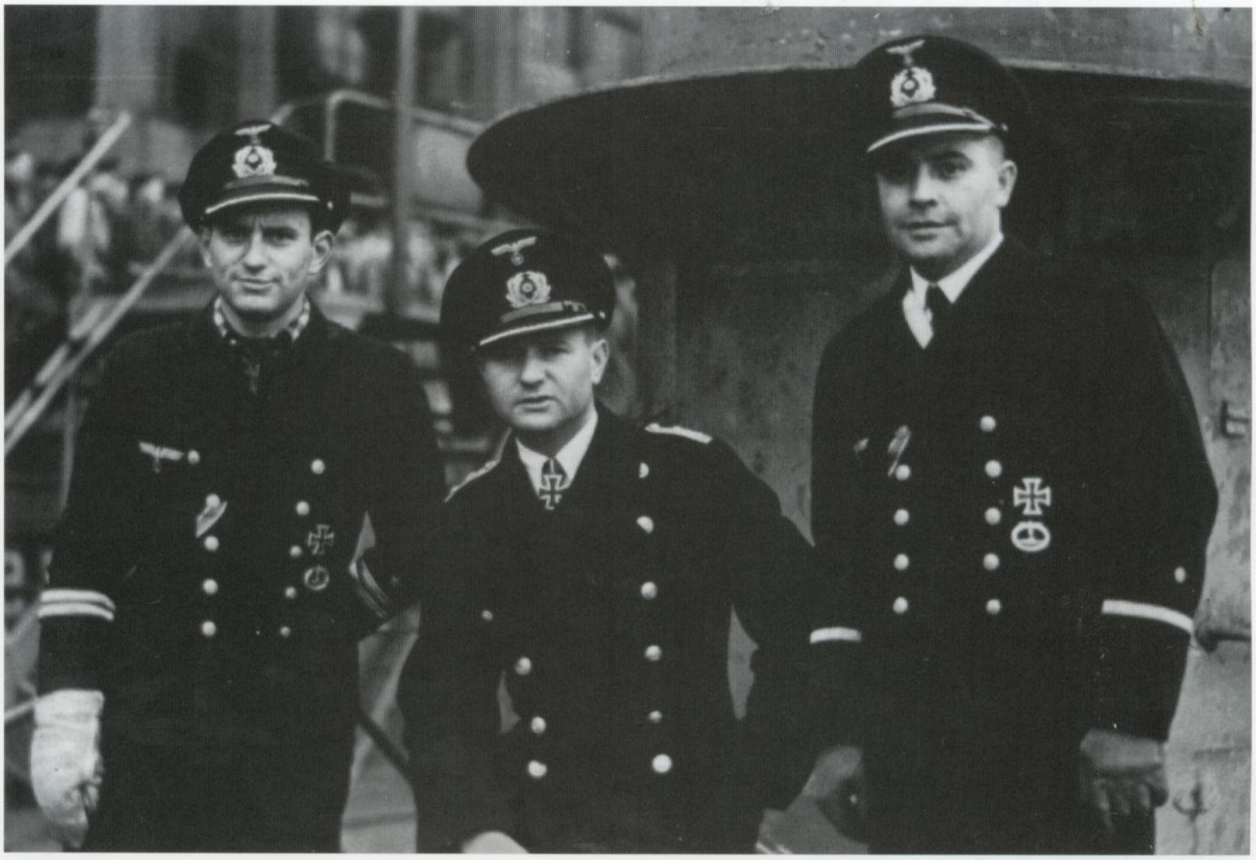


A trio of U-Boat aces. From left to right: Oberleutnant zur See Reinhard Sühren, here serving as first officer on U–48, later to command U–564 with great success; Kapitänleutnant Heinrich Bleichrodt, eventual Oakleaves winner, with 28 sinkings to his credit, here as commander of U–48; and Leutnant zur See Erich Zürn, engineering officer of U–48 who received the Knight's Cross on 23 April 1941 in recognition of his part in the successes of U–48.

tails off to prevent them snagging on any one of the myriad projecting fittings inside a U-Boat. This sailor's *Matrosenmütze* now only bears the red, white and black national cockade.

Unlike the situation in World War Two, where U-Boat men's beards were a result of the lack of fresh water available for shaving, the wearing of beards in the Kaiserliche Marine was common, usually neatly trimmed, as here.

B2: U-Boat Officer

This was the typical appearance of a U-Boat officer after a long war cruise. He wears the rubberised foul weather overtrousers and standard black sea-boots. His reefer jacket, well worn and with its once bright gilt braid sleeve-rings now badly tarnished, displays the sleeve-rings of the rank of Kapitänleutnant – one narrow ring sandwiched between two broader rings with the Imperial crown above. He wears the standard peaked service cap, but has adopted the white summer cover. This became the virtual trade mark of the U-Boat commander in the Kriegsmarine. In the Kaiserliche Marine the fashion was not so widespread, but photos of the white top being worn by U-Boat officers do exist. Around his neck hang a pair of naval-issue binoculars.

B3: Reichsmarine officer

Following the end of World War One, Germany's navy was very much on the decline. However, in January 1921 the new navy, known as the Reichsmarine, was officially founded. This Reichsmarine officer is a veteran of the U-Boat service in World War One. He wears the frock-coat, a form of dress that was discontinued in 1939. It reached to just below the knee, was double-breasted and featured a double row of five gilt buttons, the top pair of which were not fastened. Its collar was open, like the design of the collar and lapels on the reefer jacket. The sleeves bear the gilt braid rings of his rank of Oberleutnant zur See. Note that the Imperial crown has been replaced by a five-pointed star.

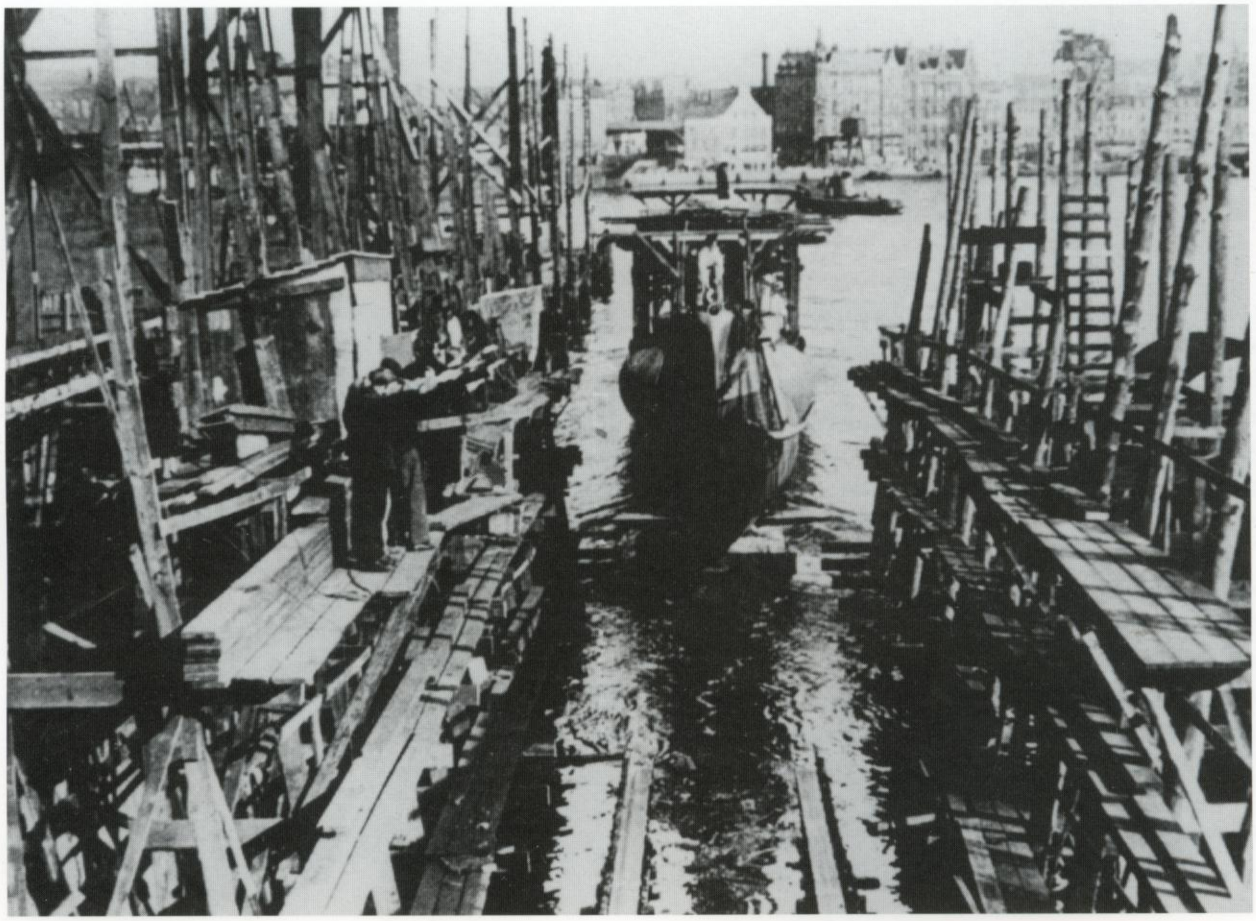
The frock-coat was unusual in that it featured sleeve rings and shoulder straps. The Oberleutnant zur See strap was in bright aluminium braid with a single gilt rank pip. The frock-coat was worn with a white shirt and black bow-tie. On the officer's left breast is the Iron Cross First Class from World War One over the Imperial U-Boat war badge.

The *Schirmmütze* has the normal blue cover, and the officer wears his aluminium brocade dress belt, together with the naval dagger and portepee.

C1: Matrosengefreiter

This *Matrosengefreiter* of the Reichsmarine in the mid-1920s wears the standard-issue long blue trousers, black lace-up shoes and summer pullover shirt. His rank is signified by two cornflower blue chevrons on the left sleeve, and above them, the trade badge of a five-pointed star, indicating that he belongs to the '*Bootsmann*' branch. On his left breast is pinned the Imperial U-Boat war badge and the Imperial wound badge, indicating that he has been wounded in action.

His *Matrosenmütze*, with its white summer cover, bears a cap tally ribbon with gilt woven block script letters. As the post-World War One German navy was not permitted submarines, there are no U-Boat-related ribbons from this era. This U-Boat veteran has been assigned to a torpedo-boat flotilla and wears the ribbon of his vessel – *Torpedoboot Kondor*. The national cockade on the *Matrosenmütze* of the Imperial navy has been replaced by a small oval metal badge bearing the Reichsmarine eagle in black.



The launch of a new Type VIIc U-Boat. Note the rickety wooden scaffolding around the slipway, and the wooden structure on the deck, intended to disguise the boat from enemy aerial reconnaissance. (Jak P. Mallmann Showell)

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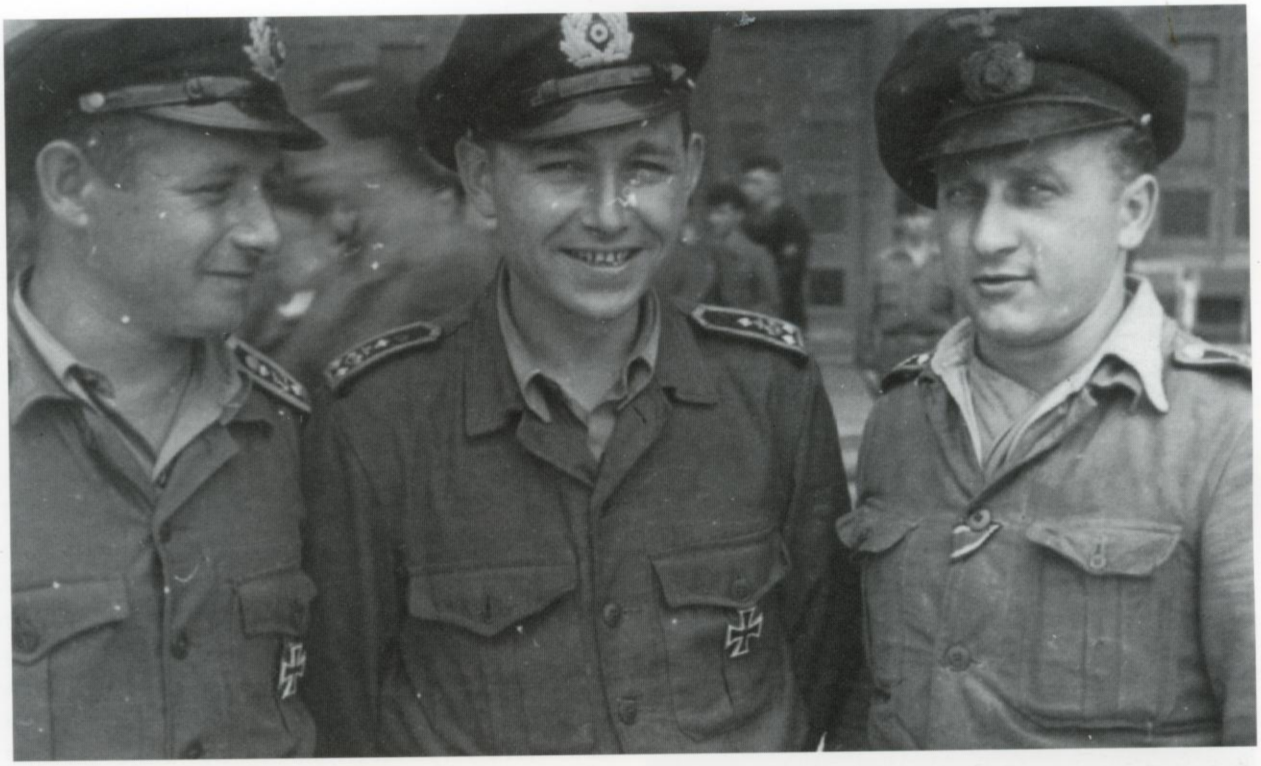


A group of U-Boat warrant officers, all wearing the U-Boat battledress-type blouse with shoulder straps fitted, and the warrant officer grade cap. Note the degree of tarnishing to the gilt wire insignia on the cap on the right, compared to the celluloid thread insignia on the centre cap. (Jak P. Mallmann Showell)

C2: Naval recruit

This naval recruit is undergoing his basic training before being assigned to a specific branch of the navy. He wears the naval version of the field grey uniform, strongly resembling that of the army. His trousers, jackboots, belt and ammunition pouches and his Mauser Kar98k Carbine are all identical to those of the army. His tunic is identified as naval-issue by several features: it has buttons with the anchor motif; the eagle and swastika breast badge is in yellow thread; the collar patches bear yellow stripes to the bars, with a white space in between; and the pocket configuration of patch pockets to the breast and slash pockets to the skirt is typically naval. His steel helmet is also identical to the army-issue piece, except for the insignia. As he is still undergoing training, the recruit does not wear any shoulder straps on his tunic.

C3: U-Boat crewman

Having completed his basic training, this sailor has volunteered for service in the U-Boot Waffe. He wears plain black leather lace-up shoes, partially obscured here by the bottoms of his trouser legs, and the normal dark blue issue pullover shirt. (Note that German navy trousers were pressed with a normal vertical front and back crease, unlike the horizontal creases traditional to the Royal Navy.) His blue pullover shirt bears the eagle and swastika emblem on the right breast, machine-woven in yellow silk thread. On the left sleeve is his trade insignia, a small yellow embroidered cogwheel, indicating his status as a seaman from the boat's engine room personnel. He wears the traditional *Matrosenmütze* with blue top, to which is affixed a small gilt eagle and swastika with the national cockade below. His cap tally ribbon, with its long trailing tails, shows his attachment to '*Unterseebootsflotille Weddigen*'; the name is woven in gilt metallic-threat in Gothic script.

D1: Kriegsmarine, working rig

Working rig for the typical German seaman was based on the white version of the standard sailor's outfit. It consisted of black leather sea-boots, trousers

***Korvettenkapitän* Adolf Piening, commander of U-155. Piening sank a total of 26 enemy ships, representing over 140,000 tons. He was awarded the Knight's Cross on 13 August 1942, and went on to become flotilla commander of 7 U-Flotille.**

cut from heavy-duty white moleskin material, usually worn with the bottoms rolled up slightly, and a white moleskin pullover shirt with a large patch pocket on the right breast. No insignia was worn on the shirt. A plain white collar was integral to the shirt. The cuffs were split, with button fastening, to allow them to be adjusted easily or rolled up.

D2: Normal service dress of U-Boat officer

When on shore, normal service dress of the U-Boat officer or warrant officer was the reefer jacket. This senior warrant officer of engine room personnel wears the standard plain black leather lace-up shoes and dark blue trousers, similar to those for lower ranks but of finer quality and with a fly rather than flap front.

The reefer jacket is of officer-quality worsted or doeskin wool, and has the officer-quality gilt wire-embroidered eagle and swastika breast badge. No sleeve insignia is worn, but his rank, that of *Dieselobermaschinist*, is displayed on his shoulder straps. These are cut from dark blue cloth with 2 cm-wide gilt braid edging and feature a small gilt metal anchor on which is superimposed a cogwheel. Exact rank is indicated by the two aluminium rank pips. On the left breast is worn the Iron Cross First Class above the U-Boat war badge. The ribbon of the Iron Cross Second Class is worn in the buttonhole. A white shirt with black tie is worn, and the outfit is completed by the *Schirmmütze* for warrant officer ranks. As authorised by regulations, he carries the Kriegsmarine dagger with portepee.

D3: Kriegsmarine, parade dress

This chief petty officer wears the parade jacket for a formal dress occasion. Plain black leather lace-up shoes are worn, together with the standard dark blue trousers. The pullover shirt is the white version, tucked into the waistband of his trousers with the black belt with gilded naval buckle.

As a chief petty officer, this *Oberfunkmaat* has the gilt braid trim to the cuffs of his jacket. Note that the collar from the shirt is worn outside the jacket.

The national emblem on the right breast is hand-embroidered in thick celluloid thread. On the left sleeve is his rank insignia, a privately purchased gilt metal version showing an anchor on which is superimposed a lightning bolt; beneath this is a single gilt metal chevron, and below the latter a speciality badge embroidered in red thread on dark blue and showing a single downward-pointing arrow over two chevrons. This indicates that he is also qualified on underwater detection equipment. On the left breast of his jacket he wears the U-Boat war badge.

The *Matrosenmütze* is worn with the white cover. His flotilla cap tally ribbon, due to war-time security restrictions, has been replaced by one bearing the simple legend '*Kriegsmarine*'.

E1: Junior NCO

This U-Boat crewman wears the pea jacket for junior NCOs and lower ranks. He has plain black shoes and standard dark blue trousers. The pea jacket is worn over the dark blue pullover shirt, with the shirt collar worn inside the pea jacket. The plain cornflower blue collar patches signify lower ranks, and on the left sleeve is the combined trade and rank patch for a '*Steuermannsobergefreiter*', consisting of a yellow embroidered sextant over two yellow rank chevrons. From the second buttonhole of the pea jacket is worn the ribbon of the Iron Cross Second Class and on the left breast, the U-Boat war badge. He wears the *Bordmütze* with, on the left side, the traditional army mountain troops' metal edelweiss cap badge. This badge was also adopted by the crew of U–124.

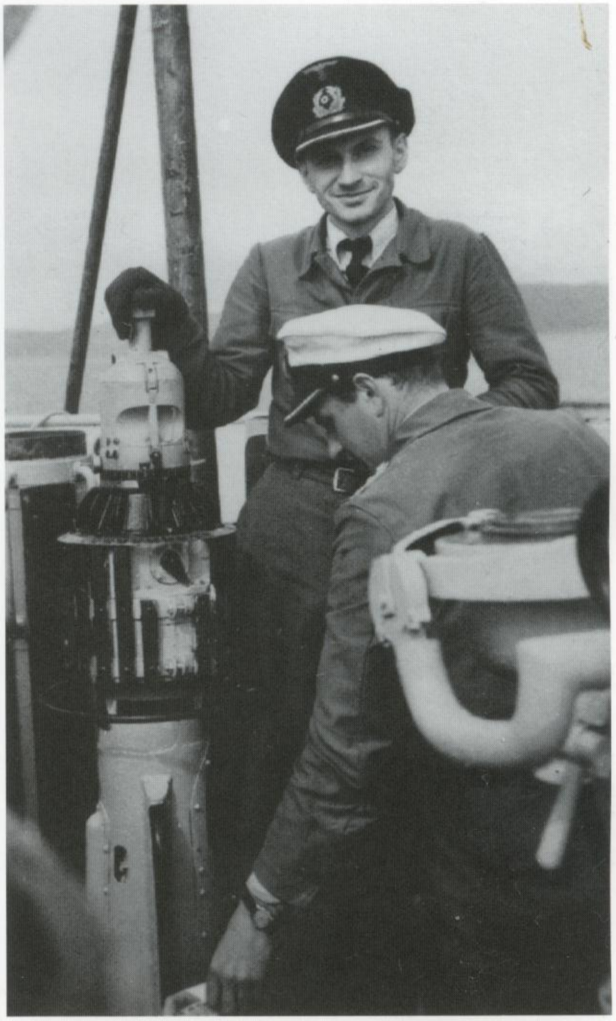
E2: U-Boat commander

In old black-and-white photographs it can be difficult to ascertain if U-Boat crewmen are wearing German or captured British battledress clothing. In this colour plate, however, the British origin of his clothing is shown by the khaki brown colouring. No attempt has been made to alter the garment or add insignia other than a set of gilt naval anchor motif buttons. A warm, comfortable, red-chequered civilian shirt can be seen at the open neck of the blouse.

As commander of a U-Boat he wears the standard officer's *Schirmmütze* with the peak embroidery for ranks from Leutnant to Kapitänleutnant. His status as commander is shown by the white cover to his cap. Although exact rank cannot be discerned, most U-Boat commanders held the rank of Kapitänleutnant.

E3: NCO

Another form of dress often worn by U-Boat crews and eminently suitable for working in the confines of a submarine was the working jacket, here worn with matching trousers. Cut from tough grey-green sailcloth-type material, these garments were often devoid of any insignia. This NCO, however, has added the trade and rank patch from the blue uniform – an anchor on which is superimposed a cogwheel and torpedo, all embroidered in yellow thread. This signifies his rank as Torpedoobermechaniksmaat. The bottoms of the trousers have been tucked into the shafts of the sea-boots.



The bridge of U–377, showing the housing for the attack periscope. With the white top to his cap is the commander, Kapitänleutnant Otto Köhler. While Köhler wears shoulder straps to his blouse, the officer standing wears U-Boat battledress clothing devoid of any insignia. (Jak P. Mallmann Showell)

F1: Crewman, battle dress

Once at sea, U-Boat crewmen were given considerable freedom to wear what was comfortable, though this did depend to a great deal on the attitude of the individual commander. This sailor wears the popular reinforced canvas shoes and grey-green battledress-style trousers gathered at the ankle, where they were adjustable, with button fastening.

The battledress-style blouse is the German pattern, made in exactly the same material as the trousers. It is worn as issued, with the additional embellishments in the form of insignia. Note that the trousers lack the large thigh pocket which is an identifying feature of captured British battledress trousers. He also wears the ubiquitous *Bordmütze.*

Fondest regards
O. Giese
DEC. 43

Otto Giese, second officer on U–181, with members of the crew, all wearing the pea jacket over their blue pullover shirt. Giese had served as an officer of the Merchant Marine, earning the Blockade Runners award, before transferring, at his own request, to the U-Boot Waffe. He served for a period under one of the greatest of all U-Boat aces, Wolfgang Lüth. (Otto Giese)

F2: Officer in battledress

In contrast to F1, this U-Boat warrant officer wears his denim battledress clothing fully adorned with the appropriate insignia. His jacket has the shoulder straps from the blue reefer jacket, on which the plain fouled anchor motif and three aluminium rank pips identify him as a Stabsoberbootsmann. Over his right breast pocket is pinned the gilt metal eagle and swastika from the white summer tunic for officers. His battledress blouse is worn with the collar open, exposing his civilian knitted scarf. On the left breast pocket of his blouse are pinned the Iron Cross First Class and U-Boat war badge.

He wears the warrant officer grade *Schirmmütze*, and on the left side of the black mohair capband is pinned the emblem of his vessel, U–569.

F3: Junior officer in tropical-issue uniform

This junior-grade officer wears the tropical-issue tunic and trousers. The long dark-tan trousers are worn with black leather lace-up shoes. The tunic is worn open. The eagle and swastika breast badge is woven in golden tan silk thread on a tan backing. Some officers replaced this with the gilt metal pin-on version from the white summer tunic. The jacket has a false cuff.

Officers' shoulder straps are worn, in bright aluminium braid on a dark blue base, indicating the rank of Leutnant zur See. He wears the officers' version of the *Bordmütze*, identical in cut to the lower ranks' version but with gilt piping to the flap and with the national emblem woven in gilt metallic

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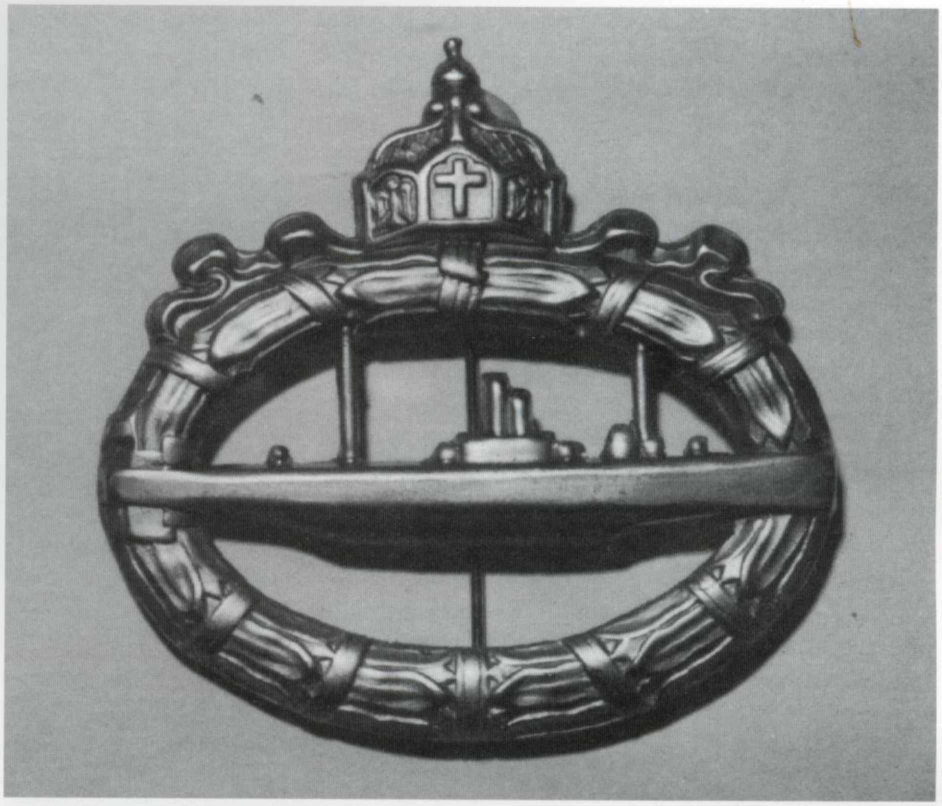
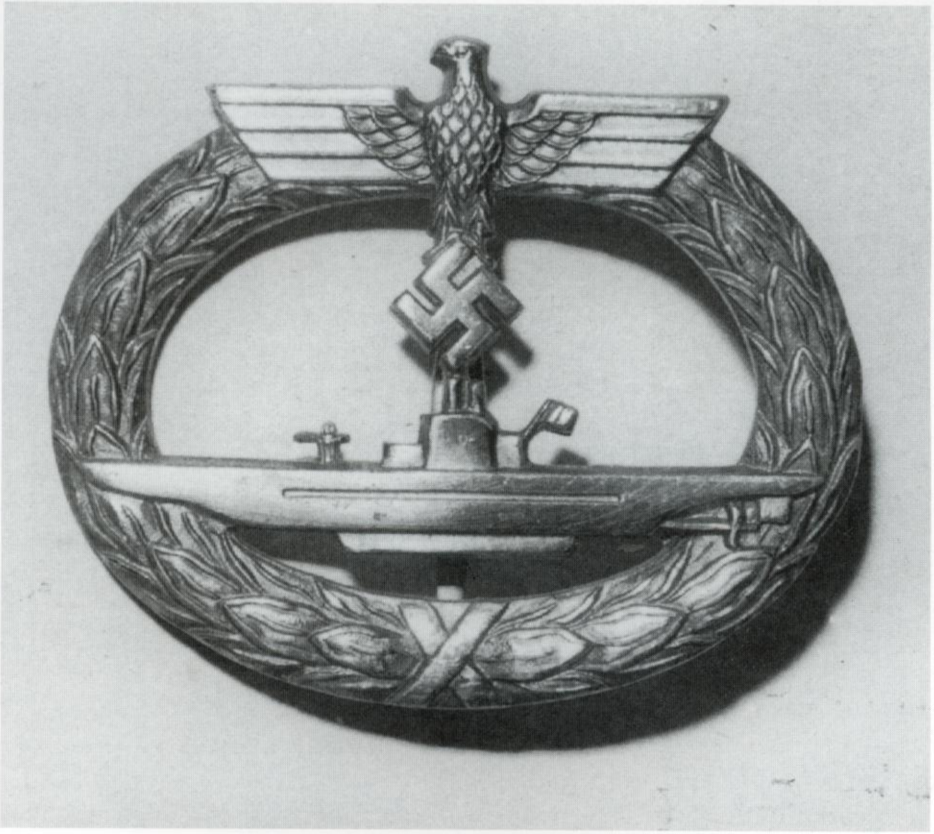
An example of the U-Boat war badge of World War One. Note the ribbon wrap to the laurel wreath and the early U-Boat, facing right across the badge. This example is of the pattern which remained in production after the end of World War One.





An early production example of the U-Boat war badge of World War Two. Note that the more modern style of U-Boat now faces left across the badge, and that the ribbon wrap to the laurel wreath found on the Imperial badge has been deleted apart from one small crossed piece of ribbon at the base of the badge. This example is in fine fire-gilt Tombak bronze and has the spaces between the legs of the swastika cut out.

thread. He also has a tan-coloured tropical shirt and a black tie. On the left breast pocket is pinned the U-Boat war badge and in the second buttonhole the ribbon of the Iron Cross Second Class.

G1: Foul-weather wear

Foul-weather clothing came in a variety of styles and colours, with little attempt at standardisation. In the main it consisted, as here, of sea-boots and black overtrousers in shiny black waterproofed material, a large three-quarter-length double-breasted coat in similar material, the collar of which could be turned up and buttoned across the throat for extra protection, and a balaclava-type cape to give protection to the head and shoulders. The outfit was completed by a traditional waterproof sou'wester.

G2: Engine personnel

This U-Boat crewman wears the leather clothing for engine personnel. It was virtually identical to the black Imperial version, but World War Two U-Boat personnel almost invariably wore it in grey leather. The jacket is worn with trousers cut from the same grade of leather and in the same colour, and worn over the sea-boots. Once again the *Bordmütze* is worn, this time with the sawfish emblem of 9 U-Flotille.

G3: Deck personnel

The leather clothing worn by this U-Boat officer is that for deck personnel. Cut in grey leather, it is in the style of the reefer jacket but of three-quarters length. It was a warm, comfortable and popular garment. No insignia is worn here, but some officers and warrant officers did add shoulder straps.

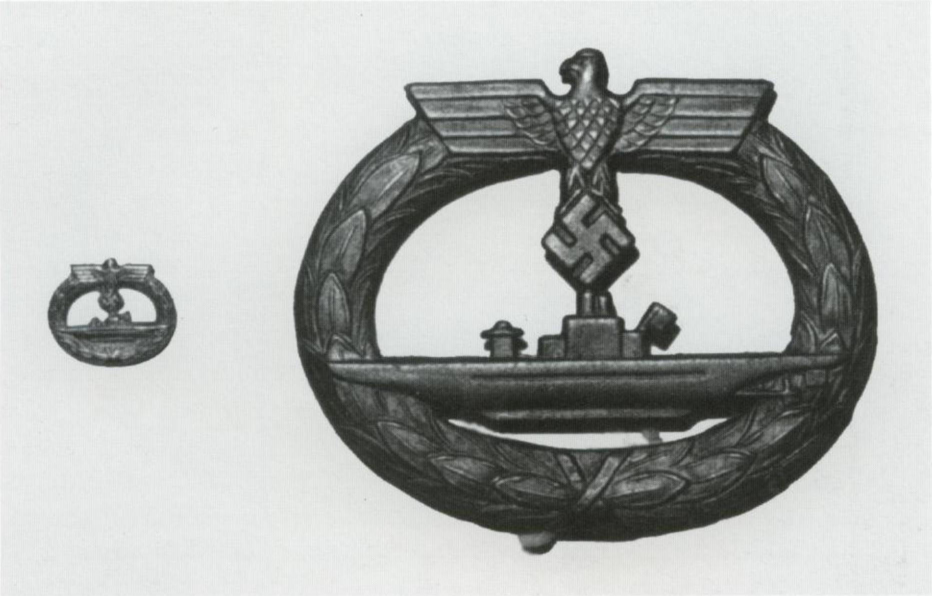
The standard blue-topped *Schirmmütze* for officers from Leutnant to Kapitänleutnant is worn. This officer would have been a Leutnant or Oberleutnant zur See, holding the post of IWO (first officer), IIWO (second officer) or LI (engineering officer).

H1: Crewman in sweater and Pudelmütze

This crewman wears the sea-boots and grey leather trousers with the issue blue knitted woollen sweater. His trousers are suspended by a non-regulation leather belt with claw buckle. His headgear consists of the so-called *Pudelmütze*, which despite its non-military appearance was issued. Typically, after a long war cruise, he sports a heavy beard.

H2: NCO in regulation tropical dress

Many U-Boats operated in the waters of the South Atlantic, the Indian Ocean and the Pacific, and a mixture of tropical and white dress was often used. This crewman wears the canvas shoes previously described, along with knee-length brown woollen stockings. The tan tropical shorts are worn, and through the belt loops has been fitted the regulation issue belt with gilt naval buckle. The tan tropical shirt is a short-sleeved version with patch breast pockets. Shoulder straps in tan material with blue



A later example of the U-Boat war badge, struck in zinc with a simple gilt wash. This has started to deteriorate, and the dull grey zinc is visible on the high points of the badge. Note the 'solid' swastika. It is shown next to one of the stick-pin miniature lapel badges for comparison of size.

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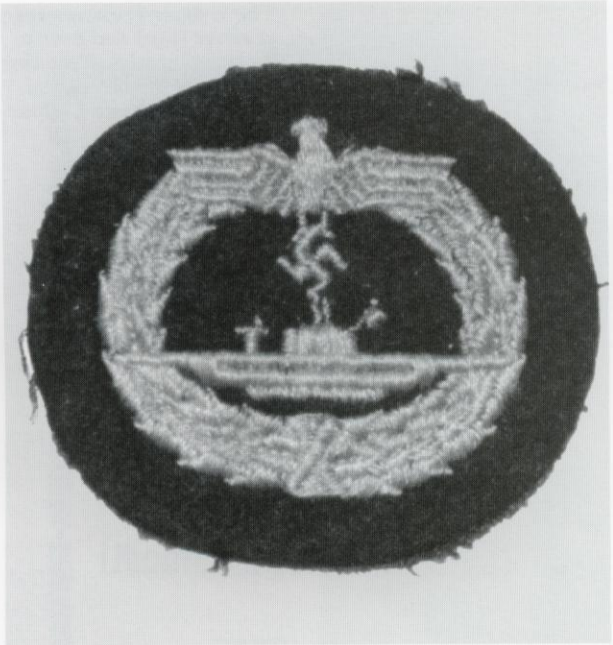
braid edging indicate the rank of *Obermaat*. The tan tropical field cap was very similar to the highly popular Afrikakorps tropical field cap.

H3: Seaman in casual dress

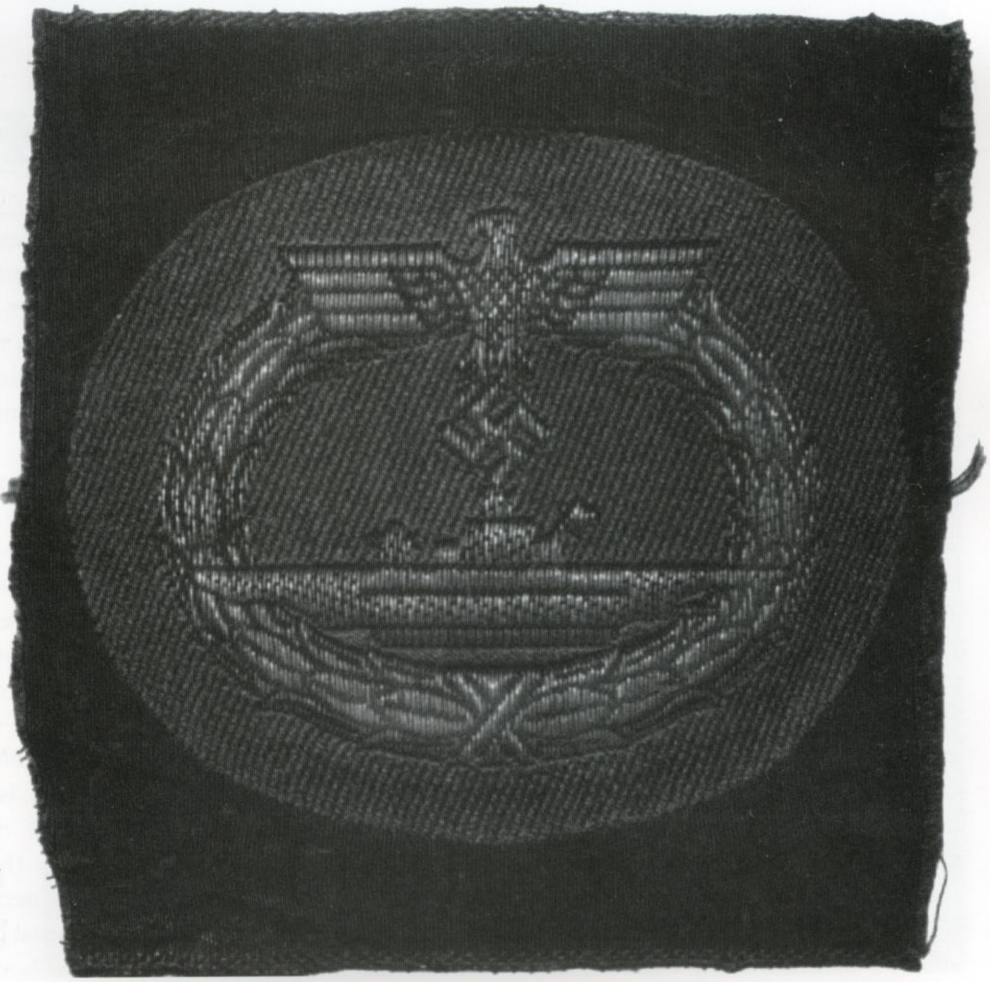
This crewman wears a slightly more informal mixture of dress types. He has the same tropical shorts and canvas shoes as H2, but has donned the white naval sports vest with its large blue thread-woven eagle and swastika emblem. He also wears the white version of the *Bordmütze*.

I1: Summer service dress uniform

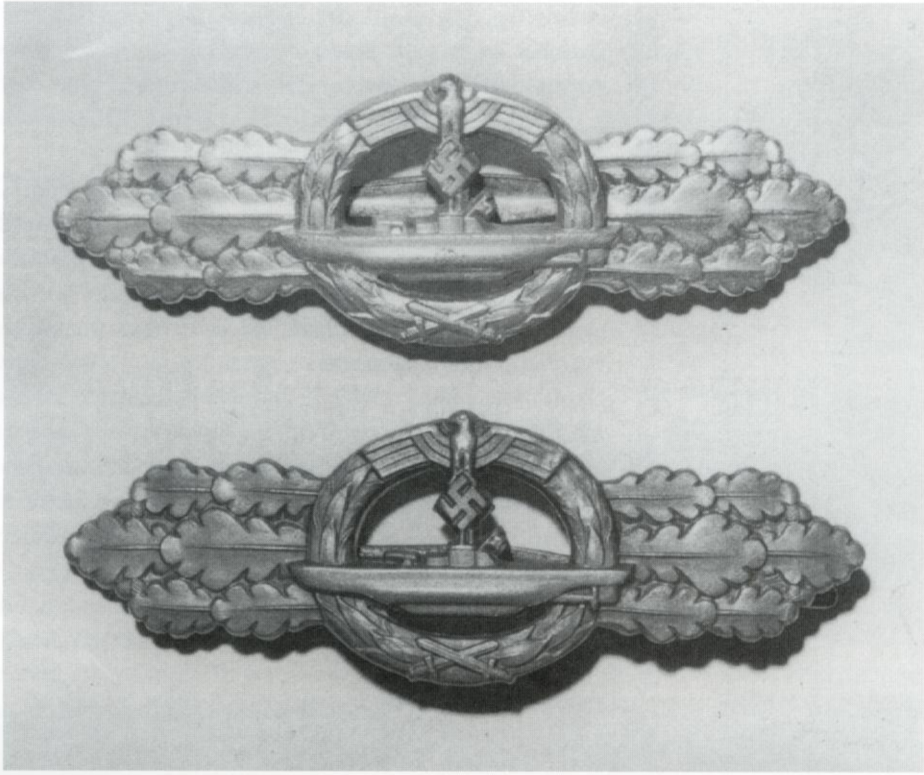
While serving in tropical waters, U-Boats often operated out of Japanese-controlled bases. This U-Boat officer is dressed in his smart white summer service dress uniform for a meeting with some of his Japanese counterparts. He wears white dress trousers and shoes, together with the white single-breasted jacket



A machine-embroidered example of the U-Boat war badge, in golden yellow cotton thread on a dark blue cloth base.



A machine-woven example of the U-Boat war badge in gilt metallic thread on a dark blue artificial silk base.



The U-Boot Frontspange in silver (top) and bronze (bottom) grades. Note the similarity of the central motif to the basic U-Boat war badge.

with four pleated patch pockets. The eagle and swastika pin-backed breast eagle, gilt anchor motif buttons and aluminium braid shoulder straps (with two gilt rank pips indicating the rank of Kapitänleutnant) are all easily removable for cleaning. A white shirt and black tie are also worn.

On the left breast pocket are pinned the Iron Cross First Class and the U-Boat war badge. On a ribbon bar above the pocket are the ribbons for the Iron Cross Second Class and the blue ribbons of the armed forces long service medals for four and 12 years. The standard officer's Schirmmütze is worn, with white cover.

I2: Officer in mixed dress

Looking more like a Canadian lumberjack than a German naval officer, this U-Boat commander has kitted himself out in the most comfortable clothing available. With his plain black leather shoes he wears the grey-green denim trousers of the battledress-type uniform, held up by a pair of braces. His chequered shirt, a civilian piece, is in warm woollen material, and over it is worn a sleeveless knitted pullover.

His headgear is a rather battered example of the officer's Schirmmütze, with a white cover. On the side of the capband is pinned a small metal U-Boat motif, the emblem of 23 U-Flotille.

I3: Standard service dress

Having returned from a particularly successful war cruise, this U-Boat officer has donned his standard dark blue service dress on the occasion of the award of his Knight's Cross. Saluting the admiral making the award, he uses the military and not the Nazi salute.

His high-quality reefer jacket bears the sleeve rings of a Kapitänleutnant and a fine hand-embroidered gilt wire eagle and swastika breast badge. Just above the slit opening of his left breast pocket is the U-Boat front clasp in silver, and on the left breast itself, the Iron Cross First Class and U-Boat war badge. The ribbon for the Iron Cross Second Class is worn from the buttonhole, and on the right breast is the German Cross in gold. The Knight's Cross, having just been awarded, is hung loosely around the neck on a long piece of ribbon. Later, a piece of ribbon would be cut to the correct length for the award to be worn at the neck, with the ribbon under the shirt collar. His normal blue-topped *Schirmmütze* is worn now that he is ashore.

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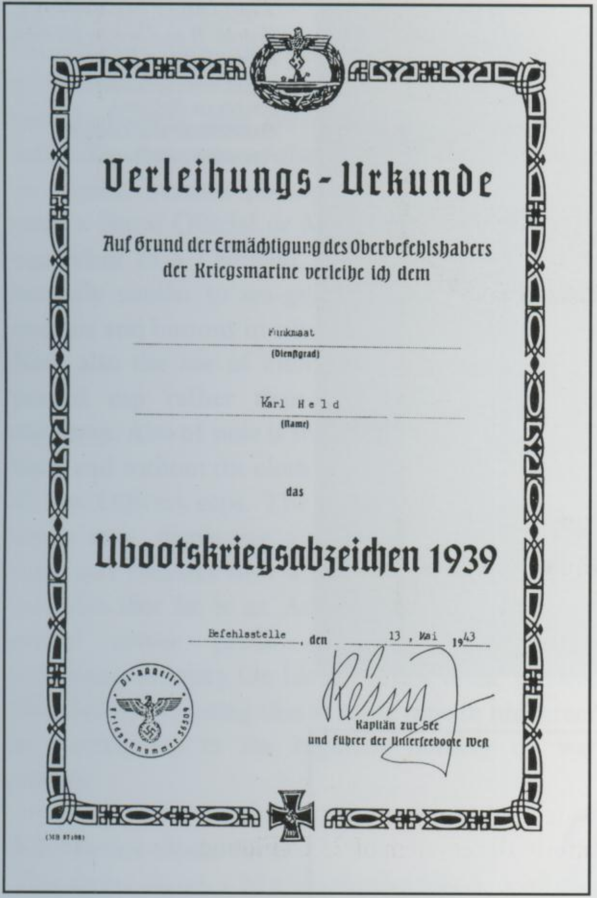


Verleihungs-Urkunde

Auf Grund der Ermächtigung des Oberbefehlshabers
der Kriegsmarine verleihe ich dem

Funkmaat
(Dienſtgrad)

Karl Held
(Name)

das

Ubootskriegsabzeichen 1939

Befehlsstelle, den 13. Mai 1943

Rohm
Kapitän zur See
und Führer der Unterſeeboote Weſt

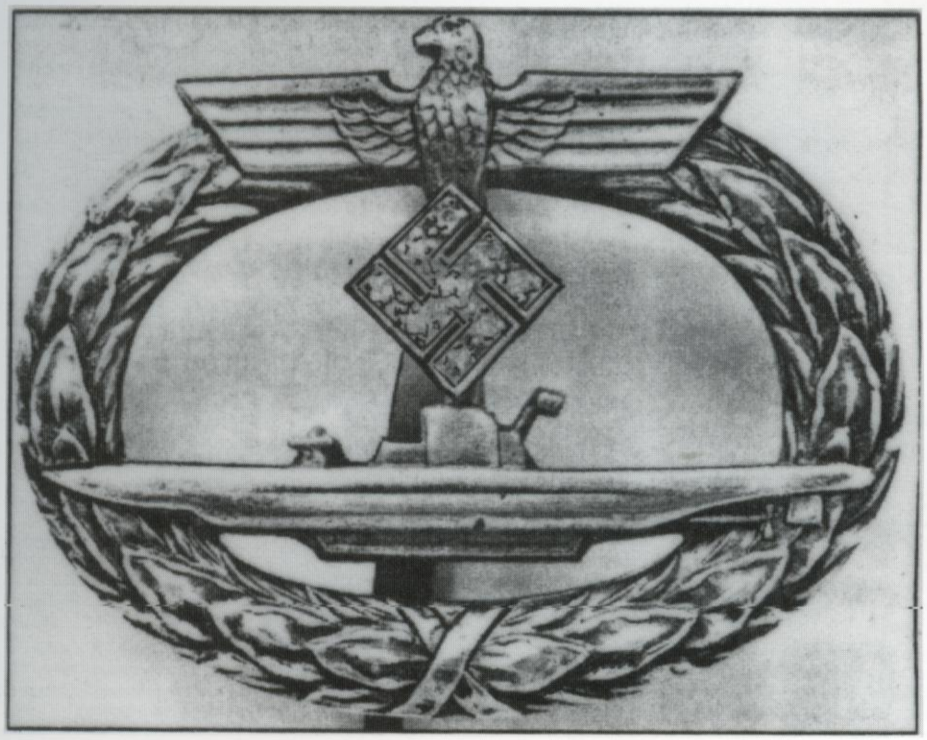
An example of the award document for the U-Boat war badge. The signature is that of Kapitän zur See Rohm, commander of U-Boats, West.

J: Flotilla and Individual Boat Insignia

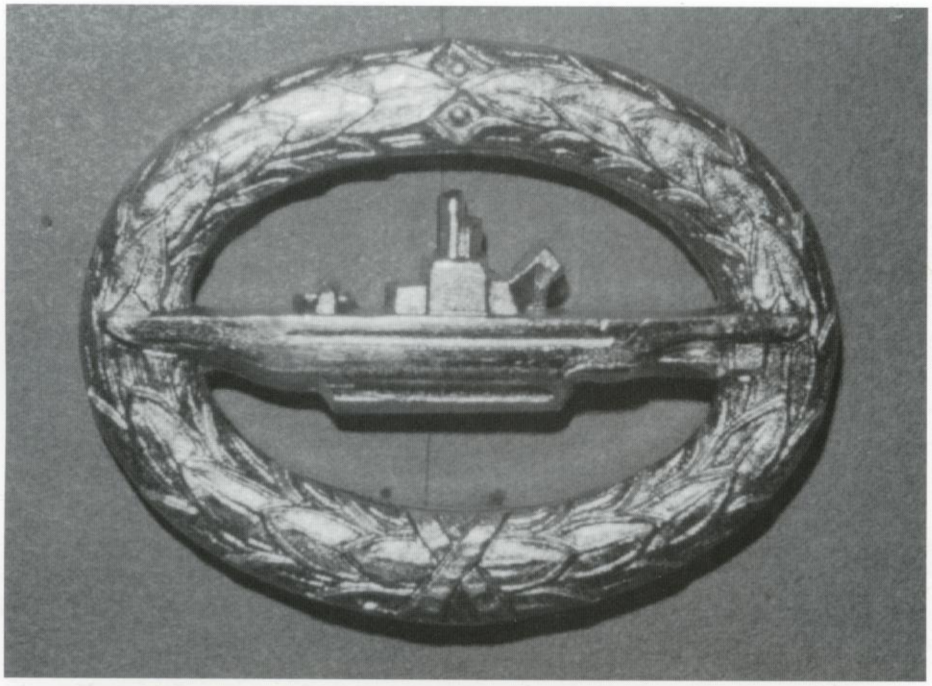
The sense of comradeship established between members of the crew of individual U-Boats was extremely high. Although officially not permitted, a large range of unofficial insignia was tolerated to indicate the wearer's own boat. These ranged from crude handmade pieces cut from scrap metal, with holes drilled on the edges to allow them to be stitched to the cap, to 'adopted' officially manufactured pieces such as the army mountain troops metal edelweiss cap emblem to finely executed enamelled badges manufactured at private expense.

Illustrated here are a few of the many types which are known:

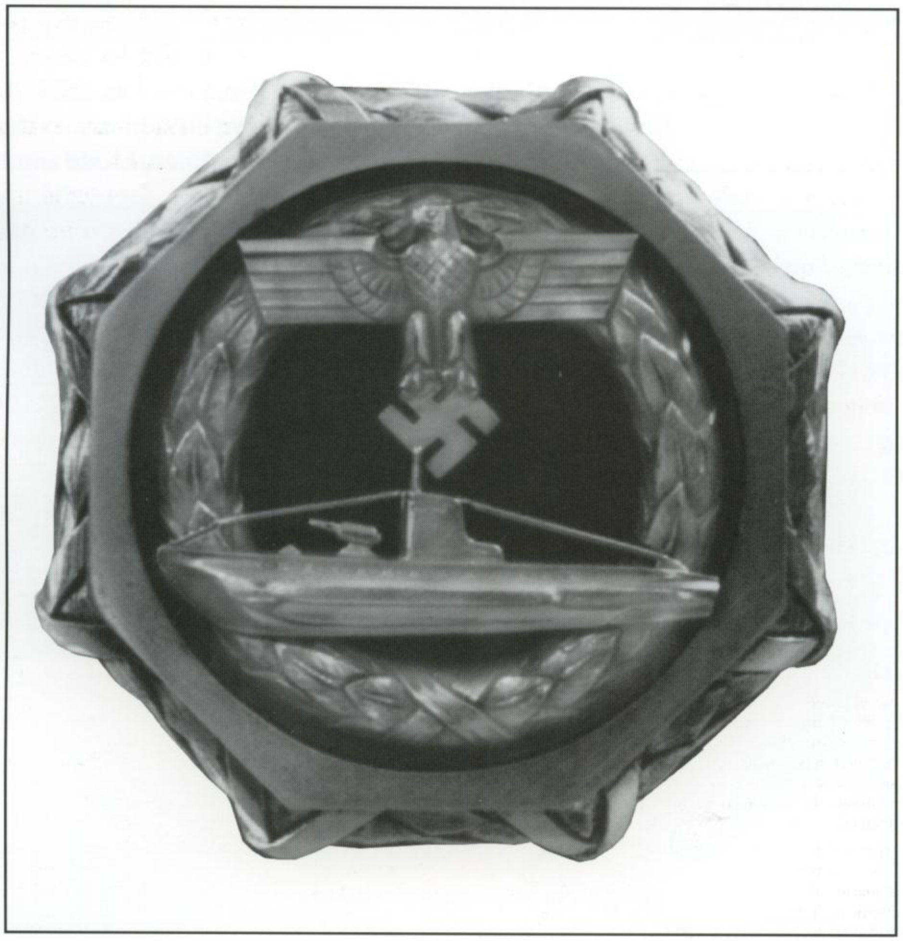
1: 2.U-Flotille
2: 9.U-Flotille
3: 10.U-Flotille
4: 23.U-Flotille
5: U-404
6: U-97, U-267, U-708, U-776
7: U-108
8: U-164
9: U-295
10: U-625
11: U-586, U-1022, U-863, U-2348
12: U-3030
13: U-201
14: U-39, U-99, U-433, U-570
15: U-591
16: U-106
17: U-672
18: U-969, U-2537
19: U-979
20: U-48, U-564



The U-Boat Badge with Diamonds. Struck in solid silver, and gold plated with a separate, larger diamond-studded swastika set over the original one. These awards were made only by the firm of Schwerin in Berlin.



The U-Boat war badge of World War Two in its new form, having had the eagle and swastika emblem deleted. Otherwise the design remains unaltered.



The exquisitely crafted end piece of the Dönitz Grossadmiral Baton. On a base of blue velvet sits a solid 18-carat gold laurel wreath and eagle with swastika. Across the wreath sits a U-Boat crafted from pure platinum. This baton was crafted by the Hamburg jeweller J. Wilm.

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K1: Marinebeamter

Front line U-Boat crews were backed by a wide range of Administrative Officials on shore, many of whom had themselves seen service on U-Boats, as evidenced by their wear of the U-Boat Badge. Based on an original wartime photograph, this figure represents a Naval Official or Marinebeamter with rank equivalent to a Leutnant zur See. His uniform is basically similar to sea-going Officers, but has all insignia and buttons in silver, rather than gilt finish. Note also the use of aluminium chincords on the peaked cap rather than the traditional leather chinstrap. Also of note is that the peak is plain, shiny black and without the cloth covering and embroidery of line Officers caps. The trade insignia above the sleeve ring, displaying a silver wire embroidered eagle and swastika over a silver wire looped motif, indicates that he is an Administrative Official, elevated career grade (Verwaltungsbeamter – Gehobener Dienst). On his left breast is the U-Boat War Badge, indicating that at some time in his career he participated in the requisite number of war cruises.

K2: Marine-Soderfürer

This figure shows a Marine-Sonderführer, with the rank of Leutnant zur See, serving as a Naval War Correspondent. His special status is indicated by the wire embroidered anchors on the lapels of his Jacket. All other insignia and clothing is absolutely standard.

Many War Correspondents earned their U-Boat Badge by accompanying the Boats on their war cruises to record their experiences for the numerous German propaganda machine.

K3: Kapitanleutnant

Towards the end of the war, when the U-Boat war was all but over, many U-Boat personnel found themselves transferred to Marine Infantry Divisions, and sent to fight at the front. This figure depicts a Kapitanleutnant in field grey naval dress, still wearing his U-Boat War Badge, but now accompanied by the tank destruction badge on his right sleeve, for single handedly destroying an enemy tank at close quarters with hand held weapons. His uniform, with loose fitting trousers, gaiters and ankle boots is a far cry from his elegant Dress uniform.

L: Flags and pennants

This plate shows some of the Flags and peennants which may be seen in various photos of U-Boats or U-Boat Personnel.

1. The Reichskriegsflagge, or State War Flag was flown on all operational warships including submarines. Theoretically flown between 0800 hors and 2100 hours, on operational warships, it was usually only flown when it would be recognisable – i.e. during daylight hours.
2. When U-Boat Officers were on shore, and using official staff cars, they were entitled to mount the Officers Car Pennant on the vehicles fender.

Command flags were flown on submarines if and when a ranking flag officer was onboard.

3. Command Flag for Rear Admiral (Konteradmiral)
4. Command Flag for Vice Admiral (Vizeadmiral)
5. Command Flag for Admiral
6. Command Flag for General Admiral (Generaladmiral)
7. Command Flag for Grand Admiral (Grossadmiral)
8. U-Boats returning from successful war cruises usually flew victory pennants indicating each ship sunk. Some displayed the tonnage sunk, some the individual U-Boat's emblem, and some a combination of both. A selection of recorded examples is shown.

Notes sur les planches en couleur

A1 Ce marin de la Kaiserliche Marine porte la tenue de débarquement normale composée de bottes de mer en cuir noir et d'un long pantalon bleu légèrement retourné. **A2** Ce Leutnant zur See porte la vareuse des officiers avec un pantalon bleu foncé uni et des chaussures lacées en cuir noir. On reconnaît son rang grâce aux deux anneaux de large ganse dorée sur chaque manche. **A3** Ce premier maître porte la veste de parade ou *Affenjacke* par dessus sa blouse de marin blanche, le col porté par dessus la veste, comme le prescrit le règlement.

B1 Ce marin porte l'uniforme de cuir du personnel des machines : une veste à boutonnage simple avec col droit. Les vestes en cuir portées durant la Seconde guerre mondiale par les équipages des sous–marins allemands étaient en majorité grises mais le noir était tout aussi courant durant la Première guerre mondiale. **B2** Apparence typique d'un officier de sous–marin après une longue mission de guerre.

Farbtafeln

A1 Dieser Matrose der Kaiserlichen Marine trägt die normale Landungskluft, die aus Seestiefeln aus schwarzem Leder und langen blauen Hosen besteht, die leicht aufgerollt sind. **A2** Dieser Leutnant zur See trägt das Bordjackett der Offiziere mit einfarbigen, dunkelblauen Hosen und schwarzen Lederhalbschuhen. Sein Rang ist durch die beiden breiten, goldfarbenen Litzenstreifen auf den Ärmeln ersichtlich. **A3** Dieser Obermaat trägt die Paradejacke, auch *Affenjacke* genannt, über einem weißen Pulloverhemd, dessen Kragen vorschriftsmäßig über der Jacke getragen wird.

B1 Dieser Matrose trägt die Lederuniform für den Maschinenraum – eine einreihig geknöpfte Jacke mit Stehkragen. Die Lederjacken der U–Boot–Mannschaften im Zweiten Weltkrieg waren meist grau, doch im Ersten Weltkrieg war auch schwarz üblich. **B2** Das typische Erscheinungsbild eines U–Boot–Offiziers nach einer langen Kriegsfahrt. Er trägt die gummierten Schlechtwetter–Überhosen und die

Il porte des cuissardes de mauvais temps, enduites de caoutchouc et les bottes de mer standard. **B3** Cet officier de la Reichsmarine est un ancien combattant du service des sous–marins de la Première guerre mondiale. Il porte un manteau, type d'uniforme que l'on cessa d'utiliser en 1939.

C1 Ce *Matrosengefreiter* de la Reichsmarine vers 1920 porte le long pantalon bleu standard, des chaussures lacées en cuir noir et une blouse de marin d'été. **C2** Cette recrue navale suit son entraînement de base avant d'être affectée à une branche spécifique de la marine. Il porte la version navale de l'uniforme de combat gris. **C3** Ce marin porte le traditionnel *Matrosenmutze* à dessus bleu, sur lequel est fixé un petit aigle doré et une croix gammée avec, en dessous, la cocarde nationale.

D1 La tenue de travail typique des marins allemands était basée sur la version blanche de l'uniforme standard des marins. Il était composé de bottes de mer en cuir noir et d'un pantalon en épais velours de coton blanc. **D2** A terre, l'uniforme de service normal des officiers des sous–marins ou des maîtres principaux était la vareuse en laine peignée ou en drap imitant la peau de daim de qualité officiers et un badge de poitrine doré avec aigle et croix gammée brodés en fils métalliques. **D3** Ce second maître porte la veste de parade pour les grandes occasions. La blouse de marin est la version blanche, rentrée dans la ceinture du pantalon, la ceinture noire porte la boucle navale dorée.

E1 Ce membre d'équipage d'un sous–marin porte le caban des gradés junior et des rangs inférieurs. Il porte le *Bordmutze* avec le badge métallique de képi traditionnel des troupes militaires de montagne, qui représente une edelweiss. **E2** Dans les vieilles photographies noir et blanc, il est difficile de déterminer si les hommes d'équipage des sous–marins portent le treillis allemand ou celui de soldats britanniques capturés. Par contre, sur cette planche en couleurs on remarque l'origine britannique de son uniforme grâce à la couleur marron–kaki. **E3** Un autre type d'uniforme souvent porté par les équipages des sous–marins et extrêmement bien adapté au travail dans les conditionsétroites d'un sous–marin était la veste de travail, portée ici avec un pantalon assorti.

F1 ce marin porte les chaussures en toile renforcée très appréciées et un pantalon de treillis gris–vert refermé à la cheville, où on pouvait l'ajuster grâce à des boutons. **F2** Ce maître principal d'un sous–marin porte son treillis en denim entièrement décoré des insignes appropriées. **F3** Cet officier junior porte la tunique et le pantalon tropicaux. Le pantalon marron foncé est porté avec des chaussures lacées en cuir noir. La tunique se porte ouverte et la veste comporte une fausse manchette.

G1 Les vêtements de mauvais temps avaient divers styles et couleurs et on faisait peu d'efforts de standardisation. Ils consistaient principalement, comme on le voit ici, de bottes de mer et de cuissardes noires en tissu noir brillant imperméable. **G2** Cet homme d'équipage de sous–marin porte les vêtements de cuir du personnel des machines. Ils étaient pratiquement identiques à la version impériale noire mais le personnel des sous–marins de la Seconde guerre mondiale portait pratiquement toujours la version en cuir gris. **G3** Les vêtements de cuir portés par cet officier de sous–marins sont destinés au personnel de pont. Ici, aucun insigne n'est porté mais certains officiers et maîtres principaux ajoutaient des épaulettes.

H1 Cet homme d'équipage porte les bottes de mer et le pantalon de cuir gris avec le chandail tricoté bleu distribué aux troupes. **H2** De nombreux sous–marins opéraient dans les eaux de l'Atlantique Sud, de l'Océan Indien et du Pacifique et on utilisait un mélange d'uniformes tropicaux et blancs. **H3** Cet homme d'équipage porte un mélange de types d'uniformes légèrement plus détendu.

I1 Durant leur service dans les eaux tropicales, les sous–marins se servaient souvent de bases contrôlées par les japonais. Cet officier de sous–marin porte son élégant uniforme de service estival pour une réunion avec ses homonymes japonais. **I2** Ce commandant de sous–marin s'est habillé de la manière la plus confortable possible. Son couvre–chef est un exemple assez mal en point du Schirmmutze des officiers, avec une housse blanche. **I3** De retour d'une mission de guerre particulièrement réussie, cet officier de sous–marin porte son uniforme de service bleu foncé pour recevoir sa Croix de Chevalier. Lorsqu'il salue l'amiral qui lui remet sa décoration, il utilise le salut militaire et pas le salut Nazi.

J1 Le sens de camaraderie entre les membres de l'équipage de chaque sous–marin était intense. Malgré l'interdiction officielle, un grand nombre d'insignes officieuses étaient tolérées pour indiquer le sous–marin du détenteur. Voici quelques exemples de ceux que nous connaissons.

K1 Les équipages des sous–marins au front étaient soutenus parde nombreux officiels administratifs à terre, dont beaucoup avaient eux–mêmes servi dans des sous–marins comme le confirme le fait qu'ils portent un badge de sous–marin. **K2** Cette figure représente un Marine–Sonderfuhrer, avec le rang de Leutnant zur See, qui fait son service comme correspondant de guerre naval. **K3** Cette figure représente un Kapitanleutnant en uniforme naval de terrain gris, portant encore son badge de sous–marin mais maintenant accompagné du badge antichars à la manche droite.

L1 Le Reichskiegsflagge ou Drapeau d'Etat de Guerre. **L2** Guidon de voiture des officiers. **L3** Drapeau de commandement de Contre–Amiral. **L4** Drapeau de commandement de Vice–Amiral. **L5** Drapeau de commandement d'Amiral. **L6** Drapeau de commandement d'Amiral en Chef. **L7** Drapeau de commandement de Grand Amiral. **L8** Flammes de victoire.

standardmäßigen schwarzen Seestiefel. **B3** Bei diesem Offizier der Reichsmarine handelt es sich um einen Veteran der U–Boot–Gattung im Ersten Weltkrieg. Er trägt den Gehrock, ein Kleidungsstück, das 1939 abgeschafft wurde.

C1 Dieser Matrosengefreite der Reichsmarine Mitte der 20er Jahre trägt die Standardausstattung mit langen blauen Hosen, schwarzen Halbschuhen und dem Sommer–Pulloverhemd. **C2:** Dieser Marinekadett macht seine Grundausbildung, bevor er einem spezifischen Teil der Marine zugeteilt wird. Er trägt die Marineversion der feldgrauen Uniform. **C3** Dieser Matrose trägt die traditionelle *Matrosenmütze* mit blauem Deckel, an der ein kleiner, goldfarbener Adler und ein Hakenkreuz mit der Nationalkokarde darunter angebracht ist.

D1 Die Arbeitskluft für einen typischen, deutschen Soldaten zur See beruhte auf der weißen Version der standardmäßigen Matrosenkleidung. Sie bestand aus schwarzen Lederseestiefeln und Hosen aus strapazierfähigem, weißem Moleskin–Stoff. **D2** An Land war der gängige Dienstanzug für U–Boot–Offiziere beziehungsweise Warrant Officers das Bordjackett aus Kammgarn oder Doeskin–Wollstoff in Offiziersqualität, das auf der Brust ein Offiziersabzeichen aus goldfarbenem Metallgespinst mit Adler und Hakenkreuz hatte. **D3** Dieser Obermaat trägt die Paradejacke für formelle Anlässe. Sein Pulloverhemd ist weiß und wurde in den Hosenbund gesteckt, der schwarze Gürtel hat eine goldfarbene Marineschnalle.

E1 Dieses Mitglied einer U–Boot–Besatzung trägt die Pijacke für Unteroffiziere und niedrigere Dienstgrade. Außerdem trägt er die *Bordmütze* mit dem traditionellen Edelweiß–Mützenabzeichen der Gebirgstruppen. **E2** Auf alten Schwarz–Weiß–Fotos läßt sich manchmal nur schwer feststellen, ob die U–Boot–Mannschaften den deutschen oder beschlagnahmte britische Kampfanzüge tragen. Auf dieser Farbtafel ist die britische Herkunft der Bekleidung jedoch durch die khakibraune Farbe erkenntlich. **E3** Ein weiteres Kleidungsstück, das von den U–Boot–Mannschaften oft getragen wurde, war die Arbeitsjacke, da sie sich für die Arbeit in den engen Platzverhältnissen eines U–Boots ausgezeichnet eignete.Hier ist sie mit passenden Hosen abgebildet.

F1 Dieser Matrose trägt die beliebten Schuhe aus verstärktem Segeltuch und graugrüne Hosen im Kampfanzug–Stil, die am Knöchel eingefaßt sind und sich mit einem Knopfverschluß verstellen lassen. **F2** Dieser U–Boot–Warrant Officer trägt seinen Kampfanzug aus Denim mit allen entsprechenden Abzeichen. **F3** Dieser Subalternoffizier trägt den Waffenrock und die Hosen für die Tropen. Die dunkelbraunen Hosen werden mit schwarzen Lederhalbschuhen getragen. Die Jacke ist offen und hat falsche Manschetten.

G1 Schlechtwetterkleidung gab es in verschiedener Machart und unterschiedlichen Farben, und man legte auf eine einheitliche Regelung nur wenig Wert. Sie bestand wie hier abgebildet hauptsächlich aus Seestiefeln und schwarzen Überhosen aus glänzendem, schwarzem, wasserdichtem Material. **G2** Dieser U–Boot–Matrose trägt die Lederbekleidung für den Maschinenraum. Sie glich der schwarzen Version aus der Kaiserzeit praktisch aufs Haar, doch trugen die U–Boot–Mannschaften im Zweiten Weltkrieg sie fast ausschließlich aus grauem Leder. **G3** Die Lederkleidung dieses U–Boot–Offiziers ist der Anzug für die Deckmannschaften. Hier werden keine Abzeichen getragen, doch fügten einige Offiziere und Warrant Officers Schulterklappen hinzu.

H1 Dieser Matrose trägt die Seestiefel und graue Lederhosen mit dem standardmäßigen blauen Strickpullover. **H2** Viele U–Boote operierten in den Gewässern des Südatlantiks, im Indischen Ozean und im Pazifik, wobei häufig eine Kombination des Tropenanzugs und der weißen Uniform getragen wurde. **H3** Dieser Matrose trägt eine etwas legere Mischung unterschiedlicher Uniformteile.

I1 Beim Einsatz in tropischen Gewässern operierten die U–Boote oft von Japan unterstehenden Stützpunkten aus. Dieser U–Boot–Offizier trägt seine schicke, weiße Ausgehuniform für eine Zusammenkunft mit seinen japanischen Kollegen. **I2** Dieser U–Boot–Kommandant hat sich die bequemste Kleidung ausgesucht, die zur Hand war. Seine Kopfbedeckung ist ein recht lädiertes Exemplar der Schirmmütze der Offiziere mit einem weißen Deckel. **I3** Nach der Rückkehr von einer besonders erfolgreichen Kriegsfahrt hat sich dieser U–Boot–Offizier zur Verleihung des Ritterkreuzes seine standardmäßige, dunkelblaue Paradeuniform angezogen. Zum Salut des Admirals, der ihm das Ehrenzeichen verleiht, bedient er sich des Militärgrußes, nicht des Hitlergrußes.

J1 Bei den Mitgliedern einzelner U–Boot–Besatzungen herrschte ein ausgeprägter Kameradschaftsgeist. Obgleich sie von offizieller Seite nicht genehmigt waren, duldete man eine breitgefächerte Palette inoffizieller Abzeichen, die das U–Boot des Trägers bezeichneten. Hier sind nur einige der vielen verschiedenen bekannten Abzeichen abgebildet.

K1 Die U–Boote an der Front wurden von vielen verschiedenen Verwaltungsbeamten an Land unterstützt, von denen viele selbst auf U–Booten gedient hatten, was durch ihr U–Boot–Abzeichen erkenntlich ist. **K2** Bei dieser Figur handelt es sich um einen Marine–Sonderführer mit dem Rang eines Leutnant zur See, der alsKriegsberichterstatter der Marine fungiert. **K3** Diese Abbildung zeigt einen Kapitänleutnant im feldgrauen Marineanzug mit U–Boot–Abzeichen, den inzwischen ein Panzerjägerabzeichen auf dem rechten Ärmel hinzugefügt wurde

L1 Die Reichskriegsflagge. **L2** Offiziers–Stander. **L3** Kommandoflagge für den Konteradmiral. **L4** Kommandoflagge für den Vizeadmiral. **L5** Kommandoflagge für den Admiral. **L6** Kommandoflagge für den Generaladmiral. **L7** Kommandoflagge für den Großadmiral. **L8** Siegesstander.

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40 NEW KINGDOM

n Offizier der Reichsmarine
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fähigem, weißem Moleskin–
zug für U–Boot–Offiziere
s Kammgarn oder Doeskin–
ein Offiziersabzeichen aus
enkreuz hatte. **D3** Dieser
Sein Pulloverhemd ist weiß
Gürtel hat eine goldfarbene

ie Pijacke für Unteroffiziere
die *Bordmütze* mit dem
irgstruppen. **E2** Auf alten
r feststellen, ob die U–Boot–
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Bekleidung jedoch durch die
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beitsjacke, da sie sich für die
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verstärktem Segeltuch und
el eingefaßt sind und sich mit
–Boot–Warrant Officer trägt
enden Abzeichen. **F3** Dieser
Hosen für die Tropen. Die
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achart und unterschiedlichen
nur wenig Wert. Sie bestand
d schwarzen Überhosen aus
G2 Dieser U–Boot–Matrose
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doch trugen die U–Boot–
eßlich aus grauem Leder. **G3**
ist der Anzug für die
getragen, doch fügten einige
n.

raue Lederhosen mit dem
U–Boote operierten in den
im Pazifik, wobei häufig eine
niform getragen wurde. **H3**
erschiedlicher Uniformteile.

die U–Boote oft von Japan
Offizier trägt seine schicke,
seinen japanischen Kollegen.
ste Kleidung ausgesucht, die
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l. **I3** Nach der Rückkehr von
dieser U–Boot–Offizier zur
dunkelblaue Paradeuniform
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en verschiedenen bekannten

len verschiedenen Verwalt-
selbst auf U–Booten gedient
ch ist. **K2** Bei dieser Figur
lem Rang eines Leutnant zur
t. **K3** Diese Abbildung zeig
nit U–Boot–Abzeichen, den
n Ärmel hinzugefügt wurde

L3 Kommandoflagge für den
lmiral. **L5** Kommandoflagge
eraladmiral. **L7** Kommando–

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38 NVA & VIETCONG
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41 ELITE FORCES INDIA AND PAKISTAN
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43 VIETNAM MARINES
44 SECURITY FORCES IN NORTHERN IRELAND
45 ARMIES OF THE GULF WAR
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Avec annotations en français sur les planches en couleur.
Mit deutschsprachigen Anmerkungen zu den Farbtafeln